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Cover page: An exciting view of the destroyer I.N.S. *Rajput*, which recently came to Madras on a ten-day visit.

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MADRAS INFORMATION
8 SEP 1952
MADRAS

Land Revenue Remission

By SRI M. A. MANICKAVELU NAICKER, Minister for Land Revenue

The past few months have been critical periods for many of our districts and in the scheme of relief undertaken by Government, land revenue remissions have played a considerable part. This land revenue or assessment is the share of what the State is entitled to get from the produce of the land. In our country, the State's claim to a share of the produce from the land has been recognised from the earliest times and although the principles of the assessment have not been embodied in any Statute, Government's prerogative to a share of the crop depends on customary law and immemorial usage. The land revenue demand represents the value in money of the State's share of the crop. This is arrived at after settlement operations, in the course of which the soil of each field is classified according to its chemical and physical properties and its outturn grain is normally paddy for wet lands and cholam or ragi for dry lands.

In the scheme of assessment itself, allowances are made for vicissitudes of the season, unprofitable areas in holdings, differences in the quality of irrigation sources and the facilities enjoyed by villagers in the matter of transport, etc. After making allowances for all these factors, the average price for the preceding 20 non-famine years is calculated and the cost of the staple produce for one is worked out, and a deduction is then made to cover the cost of cultivation. The figure thus arrived at represents the money value of the net crop. The State's share of the crop is generally slightly less than half of the money value so arrived at. In an agricultural country like ours, a good portion of the State's revenue must come from the land and our normal income from land revenue assessment is about Rs. 10½ crores per annum. The grant of remissions therefore is a matter of grave concern to the Government. It follows therefore that remissions cannot be claimed as a matter of right; they are granted as a matter of grace.

Inequities under Old Practice

It has been the long-standing practice under the ryotwari settlement in this State to charge wet assessment only under normal conditions of supply of water. Therefore, remission is granted when the crop has failed completely or even partially owing to inadequacy of water or excess of supply. In the case of dry lands, remissions of revenue are granted only when calamities, widespread or local, occur. The question whether the entire scheme of our land revenue assessment and remissions should not be put on a more equitable basis is being examined by Government in the light of the recommendations contained in the Land Revenue Reforms Committee's Report. The inequities have arisen because different districts were settled in different periods of time and several of them underwent periodical re-settlements at which assessments were enhanced on a percentage basis. As a result, there is considerable variation in the incidence of assessment between district and district. This was first brought to notice by the Marjoribanks Committee's Report, but the then Government did not implement that Committee's recommendations.

The power to grant remissions has been delegated to the Collectors of districts and the extent to which and the circumstances in which that power may be exercised are laid down in what are called the ' Remission Rules.' The basic factor in the whole scheme of remission is that the loss of crop should not have been the result of any act of commission or omission on the part of the ryot himself. For example, no remission can be granted if the lands are left waste on account of a family dispute. In normal years, a wet crop on wet land, that is to say, irrigated land, may fail in some localised areas due to failure of supply to a particular irrigation source. The immediate solution to this problem is the granting of remission of the wet assessment under that particular source. It is an easy matter to ascertain whether there has been failure of supply to a particular irrigation source. If a second crop grown on a single-crop wet land is totally lost, the water-charge for the second crop is remitted. The assessment in double-crop wet lands is remitted if no crop is grown at all or the crops grown are totally lost.

Similarly, if only a single crop is grown on a registered double-crop land, single-crop wet assessment alone is charged if it can be shown that the failure to raise two crops was due to want of water. When a dry crop is raised on a wet land which would otherwise have remained waste for want of water, only dry assessment is charged. Remission is granted even if part of a survey field or sub-division is left waste and the crop grown on the rest of the survey field or sub-division is totally lost. Remission cannot, however, be granted when the crop grown on part of a survey field has flourished. It is left to the discretion of the Collectors to determine with due regard to the principles underlying the grant of remission whether in any particular case the loss over the field as a whole may reasonbly be rated as " total ".

Destruction of the Crop as Factor

It must, however, be emphasised again that the scheme of remission rests mainly on the fact that the destruction of the crop is caused either by a deficiency of water or an excess of water and not by any lapse on the part of the ryot. Cases of loss of crop owing to excess of water may arise in time of severe floods, or may occur in deltaic areas where drainage facilities in a particular area are insufficient to drain away the water. In the case of dry lands, however, remission is not granted except when there has been some widespread calamity, as for instance, the total failure of the monsoon which we experienced recently in the Rayalaseema area and in some of the districts of Tamil Nad. The difficulty in granting seasonal remissions for dry lands is that there is no definite factor to relate the failure of crop on an individual field to the season in particular, and to exclude the possibilities of laches on the part of the cultivator himself. It would be throwing an onerous burden on the administration if it were to be prescribed that remission should be allowed year after year for failure of crops on dry lands. Suggestions have been made that these rules need liberalisation, and Government are examining the matter.

A ryot who desires to be granted remission, must apply in writing to the Revenue Inspector or the Deputy Tahsildar, Tahsildar or the Revenue Divisional Officer in time to allow of the inspection of the crop. It is not necessary

to affix any stamps to these applications. However, remission is not denied merely because an application has not been submitted where inspection has established the existence of conditions justifying the grant of remission.

Widespread Calamities

I have so far dealt with the normal seasonal remissions. But, when there are widespread calamities like drought, floods, famine and the like, remission on a larger scale becomes necessary. Collectors are not competent to sanction such large-scale measures and, in such cases, relief is given under special orders of the Government; when scarcity conditions such as we have experienced recently in several districts appear and there is likelihood of a failure of crops, the District Collector arranges for intensive inspection of the crops both by himself and by his subordinates and as soon as the unfavourable character of the season manifests itself, he reports the facts to the Government and recommends either suspension or remission of the land revenue as he considers necessary.

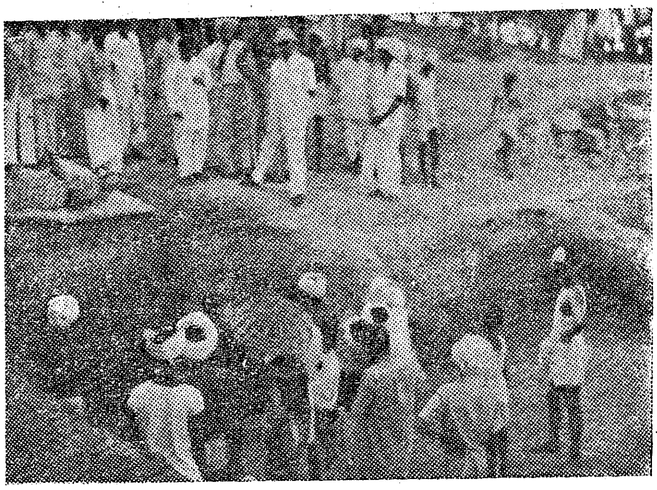
In making his recommendations the Collector is guided by the crop history of the tract during the preceding years and the actual outturn. When there is widespread loss of crops on wet lands, remission granted is on the lines already referred to earlier. Even a partial loss of crops on wet lands is taken into consideration when remission is granted under such circumstances. In some cases, when there is widespread loss, no attempt is made to estimate individual losses but an average percentage loss is worked out for the area and the assessment is reduced by that percentage. So also in the case of dry lands, remission is granted with reference to the loss over the whole tract, the extent of remission depending on the yield.

Normally, no remission is granted when the yield is more than one-half of the ordinary yield. We have had experience of loss of crops, total and partial, both as a result of deficiency of rain and as a result of excess of it. The principle adopted in granting remissions is the same, whether it be for the one reason or the other.

Rupees 75 Lakhs Remitted

During the last few months, Government have found it necessary to grant remission on a very large scale on terms far more liberal than are normally considered sufficient. It is roughly estimated that in the last fasli, land revenue amounting to about Rs. 75 lakhs has been remitted in the season-affected areas of this State. The special scheme of remissions sanctioned by Government in the season-affected districts envisages that in respect of wet lands, full remission be granted where the outturn is estimated to be four annas and below. Under normal circumstances full remission is granted only when the outturn is estimated at two annas and below. In respect of dry lands where food crops have been grown, full remission has likewise been granted where the outturn is estimated at four annas and below and half remission has been granted where the estimated outturn is between four annas and eight annas. In respect of other crops, full remission has similarly been granted where the outturn is below four annas.

In some areas, half remission has been sanctioned for wet lands which have an outturn of between four and seven annas. In the case of non-food crops also, full remission has been sanctioned where the outturn has been below four annas and half-remission where the outturn is between four annas and eight annas. Government have also granted the concession of remission to current wastes or dry lands, that is to say, lands which are not mamul wastes. Although the usual practice is to grant remission for dry lands only when the crops in an entire tract have failed, the circumstances in the affected districts necessitated that a village should be taken as the unit and remission granted if more than 25 per cent of the extent of dry lands yielded an outturn of four annas and less.



DEEPENING THE TANK : Villagers at work, deepening the tank at Urundauppanur

Ameliorative Measures

During the last five years, remissions have cost the exchequer Rs. 308·40 lakhs, making an average of Rs. 61·6 lakhs per year. There is no doubt that the land revenue payable by an agriculturist represents only a small portion of the expenditure incurred by him. The failure of the crop as a result of unfavourable seasonal conditions means bankruptcy to the poor ryot and the remission granted by the Government, can at best be only a palliative and cannot mitigate the hardship to any appreciable extent. But, where widespread calamities cause general distress, Government undertake other ameliorative measures, and funds are diverted for this purpose from the general revenues of the State.

These ameliorative measures include the liberal grant of takkavi loans, the grant of special loans for subsistence and for fodder, and the opening of a large number of so-called expansion works in order to afford employment to the agricultural labourer or small tenant-farmer who is thrown out of his normal avocation. In addition, the State opens gruel centres to feed the wives and dependents of such persons and also to attend to the aged, the infirm and the disabled. Though this type of ameliorative work is not strictly within the scope of remissions, it has proved a great boon to the ryot who is hard hit by the rigours of the season, and the efficiency and promptitude with which these relief measures are undertaken and pushed through has been the test of the success of the Government in catering to the needs of its citizens in a Welfare State.

(*A.I.R., Madras*)

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FOOD

Srikakulam District Fruit Exhibition

A large-scale Agricultural Exhibition was conducted in the premises of the Municipal High School, Srikakulam, recently. Dr. R. Nagan Gowda, Minister for Agriculture, opened the Exhibition and delivered a lecture on the importance of planting fruit trees and the methods followed in America for encouraging the fruit industry. The District Agricultural Officer spoke on the activities of the Agricultural Department with regard to the development of the fruit growing industry.

During the show many choice varieties of mango, plantain, guavas, cucumbers, papayas, sapotas, jack, etc., were displayed. Besides the fruits, fruit preserves in the shape of pickles, jams, jellies, mango pulp (Thandra) prepared locally were put on show. Grades of cashewnut, dry kernels of coconut and coconut oil were some of the by-products exhibited. Varieties of honey with live-colonies were exhibited by the ryots.

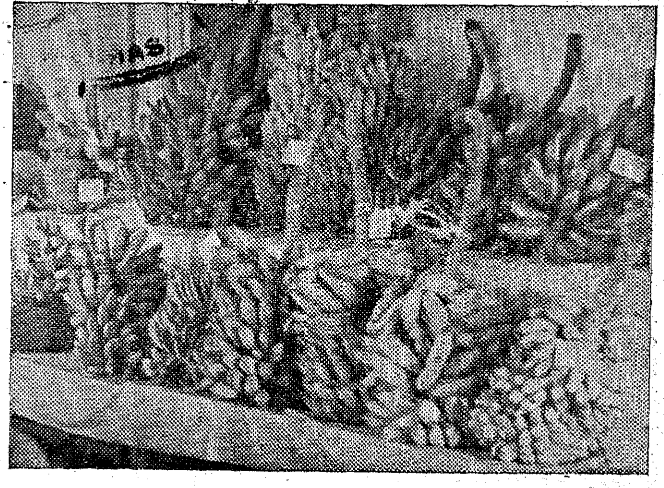
Nearly 45,000 people visited the Exhibition. Officers of the Agricultural Department conducted demonstrations on the selection of seednuts, methods of raising nursery, selection of plants for planting, grafting, budding, layering, etc. At the Exhibition nine rolling cups, 26 silver articles, 40 silver medals and 25 certificates of merit were presented to the winners. The fruit show has given wide publicity to the several aspects of horticulture and disclosed the potentialities of growing fruits in that district.

Agricultural Exhibition conducted in the Araku Valley

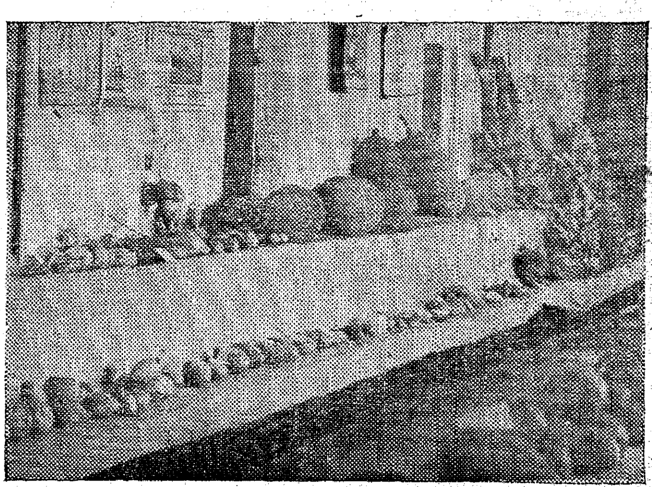
A large scale Agricultural Exhibition was conducted in the office premises of the Special District Agricultural Officer, Araku Valley, Visakhapatnam District. The Health, Medical, Revenue, Women's Welfare and Rural Development Departments also participated in the show. About 200 visitors, mostly the hill tribes, visited the show. Demonstrations were conducted with tractors and improved implements, and were greatly appreciated. Paddy, ragi, samai, vegetables, fruits, subsidiary food crops and green manures were displayed. Live specimens of green manure crops like Sunhemp, Glyricidia and Sesbania were put on show.

White Leghorn eggs, birds and Mandya sheep were exhibited. The Special District Agricultural Officer explained to the ryots the various aspects of improved agriculture and requested them to take advantage of the same. Special propaganda was done on the Vanamahotsava celebrations in that area and the ryots were specially requested to plant fruit trees during the Vanamahotsava Week.

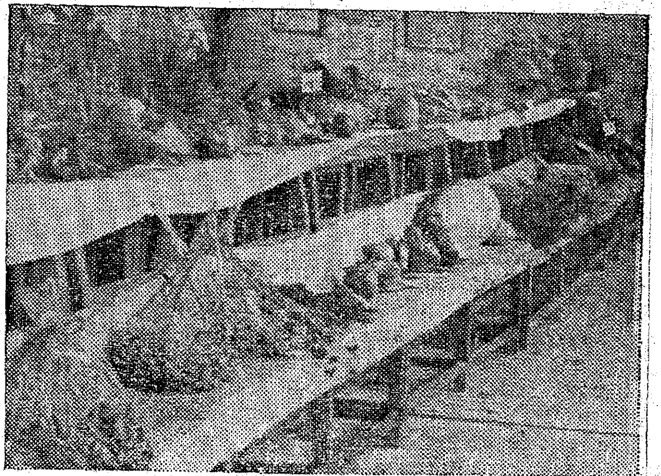
Sri Swabhi Chandrapradhan, Headman of Padmapuram village, explained to the ryots the different aids to food production accorded by the Agricultural Department and requested them to grow more food and improve their lot. The Rural Development Officer, the Medical Officer and the Women's Welfare Organizer also addressed the ryots on the activities of their respective departments. Such propaganda activities really help to create an enthusiasm and earnestness in the ryots to improve their economic and social conditions.



PLANTAINS : Displayed at the Srikakulam Fruit Exhibition



JACK AND MANGO : Prize specimens exhibited at Srikakulam



PINEAPPLES AND PUMPKINS : On view at Srikakulam

Growing More Paddy in Godavari and Krishna

By Sri MULUKUTLA SATYANARAYANA, B.A., B.SC. (Ag.), Deputy Director of Agriculture, II Division, Eluru.

In the districts of Godavari and Krishna, the dry paddy variety *Budama* and the irrigated varieties *Basangi* and *Rasangi* are raised under cultivation early in the season commencing from May-June and the produce is obtained by September-October. This produce is mostly utilised for issue as wages in kind to the farm servants and to the harvesting labour, of the chief medium and late duration varieties. These *Budama*, *Basangi* and *Rasangi* varieties occupy nearly a fourth to a fifth of the paddy ayacut of these districts. After meeting the wages of the labour in kind, in the manner aforesaid, the surplus is not consumed locally but is converted to parboiled rice.

Till the beginning of World War I (1914) all this surplus used to be converted to parboiled rice and exported to Ernakulam from Kakinada Port by coastwise boats and ships, on a freight rate of Re. 0–6–3 per bag of two Imperial maunds. At that time and in subsequent years, there used to be a freight war between the railway and the steamship companies in regard to the transport of this commodity. Local population of these districts other than the labour, fear digestive troubles by the consumption of the raw rice of these varieties. Parboiled rice is not locally consumed by any class of population. Under these circumstances, the rice crop of these varieties has assumed the role of an industrial and a cash crop.

Season-bound Nature

The season-bound nature of these varieties and the earliness in start so essential for potential production, sometimes clash with the belated south-west monsoon or late freshes in the rivers Godavari and Krishna. In the present year, for instance, the late supplies of water in the Godavari river system (unprecedented for the past 23 years) affect the productive capacity of the *Basangi* and *Rasangi* varieties, on their consequent late start. A solution to overcome this handicap and to maximise production by a spread of the *Basangi* and *Rasangi* varieties without interfering with the crop calendar of the districts between November and April, rests with tapping the underground water system existing independently of the surface river system.

The potential productive capacity of *Basangi* and *Rasangi* varieties is exemplified by the Crop Competition prize won by MTU. 3 (*Potti Basangi*) during 1951–52 amongst all the varieties raised in the three districts of this division. The yield of the prize-winning plot, of the village of Palakoderu in Bhimavaram Taluk of West Godavari District, is 9,400 lb. (green weight). This roughly works out to 56 bags of two Imperial maunds each. Deducting nine per cent for dryage (a figure based on ten crops of a five-year period for the whole State), this yield roughly works out to 50 bags (of two mperial maunds each) of dry grain. The reliable nature of this yield is further enhanced by the same land, winning for another variety in 1950–51, the division prize for the three districts. Similar experience was obtained with a yield of 45 bags of dry grain for this strain MTU. 3 in the village of Vendra adjoining Palakoderu, in the same taluk of Bhimavaram, in 1935 when the crop was planted in May with water made available from a canal lock, due for repair soon.

The existence of seed-bed tanks in the West Godavari District makes possible the starting of nurseries for this variety towards the end of April. The non-existence of such facility in the other districts of the division is nowadays being met by tapping the underground artesian bed through tube wells. In this year of drought, some of the existing tube wells brought forth incomes of nearly Rs. 2,000 each by lifting water through motive power, and discharging the same into existing distributaries of the surface river system; and irrigating nurseries, situated alongside the distributary channels to lengths of one to two miles.

Hydrology of Underground Water Bed

Nearly 80 years ago, the Geological Survey of India indicated the existence of an artesian bed between Kakinada and Eluru. This was utilised by the Madras Railway in supplying water to locomotives from borewells through overhead tanks and water columns, by about the year 1890, at the Railway stations of Kakinada Port, Samalkot and Eluru. The same supply was tapped by Messrs. Deccan Sugar and Abkari Co., Ltd., for use of their factory at Samalkot, by the year 1902. The rise in the price of paddy to Rs. 7–8–0 per bag of two Imperial maunds during World War I created an impetus in the land-holders resident in the area lying between Rajahmundry and Samalkot, to put bores that effected over-ground deliveries and raise two crops of paddy per year, in their holdings.

The cost of a tubewell ranged from Rs. 1,500 to Rs. 2,000 and it was realised by four crops taken in a period of two years. This impetus has reappeared in the war and post-war years of World War II, in all the three districts of the division and sporadic efforts have been made to increase production and reap heavier returns on existing holdings, by resort to these tubewells, which are now situated in the taluks of Vijayavada and Gannavaram in Krishna District; in Eluru, Tanuku, Tadepalligudem and Kovvur of West Godavari and in Rajahmundry, Ramachandrapur, Kakinada and Pithapuram of East Godavari. This contiguous zone is 130 miles in length and 30 miles in width, embracing an area of 3,900 square miles.

The underground water bed, forcing up the spring, is met at depths varying from 60 feet to 160 feet. The delivery under this forcing up is either above ground, or to ten feet below ground level. This artesian bed is definitely connected with the river water of the Godavari and Krishna. For laying foundations in the river bed of Godavari, at Alamur, for a road bridge across the river, the water shot up from a bore of 60 feet depth. This artesian bed in some localities runs to nearly five miles off the flood bank and parallel to it, as between the villages of Dulla and

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Alamur, in Ramachandrapur Taluk of East Godavari. Confirmatory evidence is available from a bore in the premises of the factory of the Andhra Sugars, Tanuku, situated by the side of Gosthanadi, a mouth of the River Godavari. Water shot up to 10 feet from ground level in this bore, run to a depth of 85 feet from ground level.

To these bores are constructed reservoirs of 20 feet depth and of diameters ranging from 15 feet to 30 feet. Existing supplies from these reservoirs are utilised either through oil engine pumpsets or through motor pumpsets, for raising vegetables for the Vijayawada market or for growing the strain MTU. 3. With 3-inch deliveries, 20 acres are tackled under a tubewell, to raise the paddy of this strain.

Scope for Maximisation

Experiments conducted nearly 30 years ago in the Agricultural Research Station, Samalkot, at the instance of the Collector, Krishna, laid manifest that the earlier start of paddy cultivation from April onwards up to June is attended with the highest yields as against starts during other months in these trials. If with strains in *Basangi* and *Rasangi* like MTU. 3, 4, SLO 9, etc., crops are finished by September-October, the rest of the year can accommodate the cold-weather cropping, or an intermediate or a second crop of paddy. In this cold-weather cropping, Virginia tobacco can be fitted in. An instance has come in the factory zone of the sugar factories at Tanuku, of the harvest of a crop of sugarcane in September and of a ratoon by April following, with standards of purity of cane juice to the mark. This is a fresh field in this scheme. Cottons and groundnut, gingelly and onions can also be suitably fitted in. Plantains to the market from both the "Seethakattu" and "Tholakari" seasons arrive between January and June.

September-October planting immediately after the *Basangi* and *Rasangi* harvests can lead to a fresh supply of plantains to the market between June and December. Perennial supplies of green leaf can be secured with the planting of Sesbania and Glyricidea on field bunds under the ayacuts of these tubewells that admit of the new crop calendar under a perennial source of water-supply.

Financial Implications

Excepting the floating capital to be issued under takkavi loans, there is no financial commitment to the State. The sum of Rs. 3,000 per tubewell may be recovered in 20 instalments of Rs. 150 each. The existing establishments of the Agricultural and Revenue Departments will respectively issue and recover the loans. The District Agricultural Officers may be empowered to grant loans up to Rs. 3,000 per individual; and the Takkavi Manual may be suitably amended in this regard. The Co-operatives may take up the supplies of the materials required in the scheme.

The extra food production per unit of 500 wells, per district, for the three districts of the Eluru Division, works out to 500 wells × 20 acres × 18 bags, or 180,000 bags or 12,857 tons of rice-in-husk.

With the prospect of at least ten such units, in this area of 3,900 square miles, the extra production is estimated at 128,570 tons. This covers a pretty good fraction of the existing deficit of Malabar, Travancore and Cochin that consume parboiled rice. The extra production for the ten units, estimated at a moderate rate of Rs. 15 per bag, may be valued at Rs. 27 crores of rupees annually. For this, a floating capital of 3,000 × 500 ÷ 10, or $1\frac{1}{2}$ crores of rupees, which may be spread, if necessary, conveniently to a number of years, is all that is required.

Unit of 50 Wells

These tubewells may be connected to oil-engine pumpsets or motor pumpsets with the electricity connections now granted from thermal stations, to be changed over to hydro-electricity, from Machkund, from 1953 onwards.

Estimates.

(i) *Expenditure*—	
(a) Non-recurring—	RS.
(1) Boring charges and cost of pipes from lengths ranging from 60 feet to 100 feet.	400
(2) Reservoir in 15 feet diameter and 20 feet depth	1,800
(3) Motor pumpsets with 3-inch delivery..	800
Total ..	3,000
(b) Recurring—	RS.
(1) Running of the installation at Rs. 3 per day, for 90 days between the months of May and October, excluding the rainy days of the South-West Monsoon ..	270
(2) Interest at $4\frac{1}{2}$ per cent on Rs. 3,000 to be secured under takkavi loan	130
(3) Cost of cultivation, at Rs. 150 per acre, on 20 acres of the MTU. 3 crop	3,000
Total ..	3,400
(ii) *Returns*—	
(a) Gross—	
Produce 300 lb. per acre (18 bags of two imperial maunds each) at Rs. 15 per bag, 20 acres	5,400
(b) Net—	
Gain from the MTU. 3 crop alone in the cropping calendar of the year, under one tube well	2,000

Revised Orders on Prevention of Smuggling of Foodstuffs During Nights

The Government have passed the following order, in supersession of the Order, dated 3rd April 1947, in respect of prevention of smuggling of foodstuffs by motor vehicles during nights:—

No driver, owner or other person in charge of a motor vehicle for which a public carrier's permit or a private carrier's permit has been granted shall, when such vehicle carries paddy, rice, millets and their products excluding products of foodgrains which are used as cattle foods, viz., rice bran, wheat bran, bran and husks of millets and maize, drive it or cause it to be driven between the hours of 7 p.m. and 6 a.m. on any road or land situated in a district which is notified by the Collector in the District Gazette.

This order takes effect from the date of its publication in the *Fort St. George Gazette.*

Restoring Sight by Corneal Transplantation

You can get back your sight if you have lost it on account of a corneal opacity.

The cornea is what is commonly known as the 'Black' of the eye. It appears black on account of the pigmented iris diaphragm behind it. The cornea is really transparent and it has to be clear for purposes of good vision for light rays to pass through. If the cornea loses its transparency, sight is interfered with, the degree of visual disability depending on the density, the situation and size of the opacity. The cornea may become opaque from injury or as the result of disease. A very common cause of opacification of cornea is an ulcer of the cornea leaving behind an opaque scar when it heals.

Prevention is always better than cure and prevention of the conditions or prompt treatment of these which result in corneal opacities should receive the foremost attention. Preventive medicine has reached such a high pitch of efficiency in the Western countries that corneal scars are comparatively rare to come across there. However, we are not concerned with prevention at the moment.

Here, in our country, corneal opacities are extremely common. In other words there are many blind or partially blind from this cause and the curative aspect of this is of greater importance here than elsewhere. Thanks to modern surgery, it is now possible to restore sight to many of these unfortunate persons hitherto doomed to blindness for life.

Corneal Grafting

The operation is corneal transplantation (corneal grafting, keratoplasty). It consists in removing the central portion of the opaque cornea of the patient (recipient) and replacing it by a clear piece of cornea (graft) of equal size from the eye of a dead person (donor). A live person whose eye with a clear cornea has to be removed for some reason or other, e.g., a malignant growth in the eye, can also be a donor. The operation is done under local anæsthesia. The graft is helped to stay in place by supporting sutures which are removed on the 8th day without any anæsthesia.

The graft takes easily but it is more difficult for it to remain clear. For corneal grafting to be successful as a sight restoring measure, the eye of the recipient must be healthy apart from the opaque cornea. The operation is of no use where parts of the eye other than the cornea, e.g., retina or the optic nerve or its connections are diseased. It is not also possible to perform it in all cases of corneal opacities. The scope of the operation is therefore somewhat restricted but this does not detract from its utility. Where the operation is indicated, the result is spectacular, the vision improving practically from blindness to normal.

The donor's eye is removed as soon as possible after death and is preserved in a refrigerator till it is required. It has to be used in a day or two. A place for the storage of such eyes for keratoplasty is an 'EYE BANK'. Selected patients are kept in readiness on a waiting list and the operation is performed at the earliest opportunity when a graft is available.

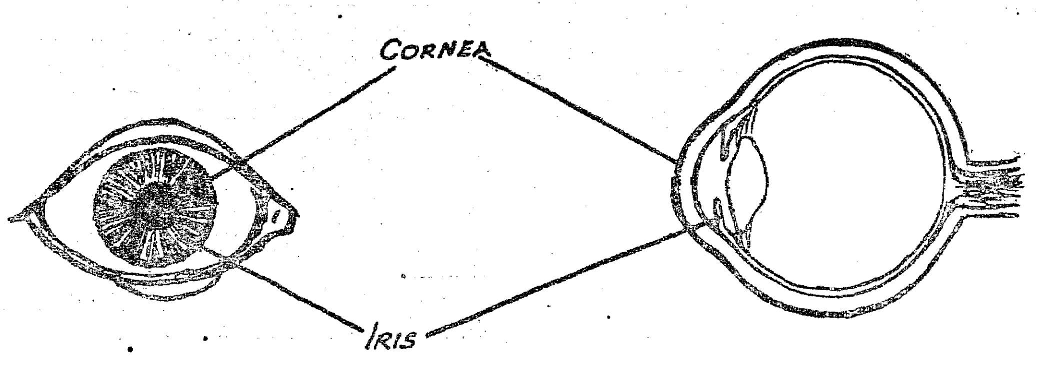
Eye Bank at Egmore

The public are hereby informed that an eye bank was opened at the Government Ophthalmic Hospital, Egmore, Madras, early in 1948 and that corneal transplantations are being performed in the same institution.

One young man had an injury to his eye with a piece of steel, which resulted in an ulcer of the cornea. With energetic treatment the ulcer healed and the eye was saved, but the scar left behind by the ulcer reduced his vision to practically nothing and so he was thrown out of his job. Now after corneal grafting, he has almost normal vision (pictures on page 9) and has returned to work.

If your sight is defective on account of a corneal opacity, seek the advice of the Government Ophthalmic Hospital, Egmore. You may be a suitable case for corneal grafting. You may be destined to regain your lost sight.

In U.S.A. and other Western countries, some persons about to die make provision in their wills for the presentation of their eyes after their death to the Eye Bank. These men have set an example for others to follow. In death, you can give light and bring happiness to your less fortunate fellow beings who tread the path of life in darkness and in distress.



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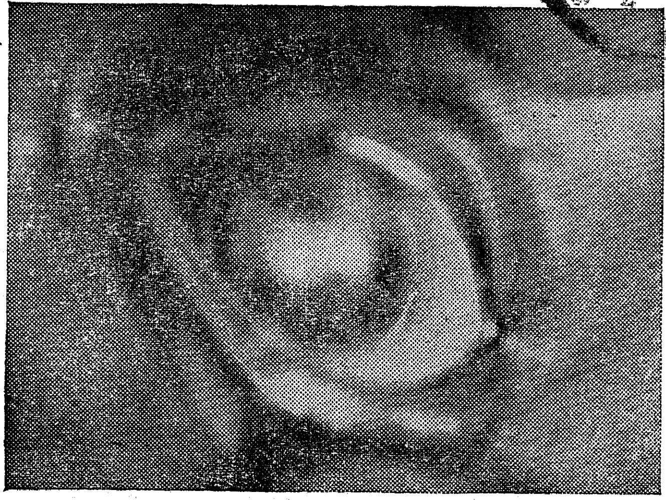
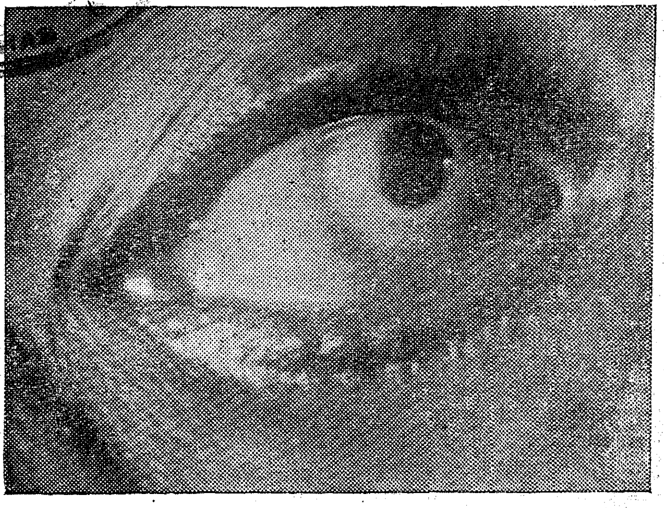


BEFORE : *An eye with an extensive and dense corneal scar.*



AFTER : *An eye after operation. The clear dark circular portion in the centre of the cornea is the graft.*

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"DIAL 93"

It was past midnight on a new moon day in February. It was quite dark and the silence of the night was broken only by the murmur of the distant waves of the sea. The residents of Triplicane had retired to bed and the streets were quite deserted. Except for the glimmer of the street lamps, the night was enveloped in utter darkness. A bright light from a powerful 60 candle-power bulb was piercing the darkness from an upstair room of a house in a not-very-prominent street in the locality. The sole occupant of that room, a young man of 19, was engaged in a losing struggle to shake off the slumber that was creeping over him. A book lay open on the table in front of him and he had been trying to cram the facts, figures and dates in that book; he was appearing for the Public Examination a few weeks hence.

His eyelids involuntarily closed and he was just beginning to dream. He was jerked out of this drowsy state by something which disturbed the stillness of the night. The strange noise of the friction of rubber tyres on the surface of the tar-road and the sudden jamming of the brakes of a car which stopped abruptly brought him to the world of reality. His attention was irresistibly drawn to the direction from which the sound came and he looked down through the window into the street. A car was drawn up at the opposite house. Ordinarily Gomes, the young man, would have passed the incident by but for some strange happenings. He suddenly remembered that the occupants of the opposite house were away from town and were not expected back so soon. He thought for a moment whether they could have changed their mind.

But what was the train by which they could have arrived at dead of night? Even the Grand Trunk Express was keeping time these days! And then he noticed three strangers getting down from the car hurriedly. Now all his attention was rivetted on that scene. And he watched with interest. One of the men tried the lock, shook it and then turned to his comrades and nodded his head. Then the trio produced something which looked like a bunch of keys, and Gomes was certain that they were now trying to break into the house. Now he was certain that these nocturnal intruders were no bona fide visitors and that they were up to some mischief. What was Gomes to do? Any other young man in his circumstances might have thought, "What matters it to me; the Police will look after these fellows," and would have gone back to his studies or sleep.

Sense of Public Duty

But Gomes, who had the laudable ambition of becoming a Collector or a Police Officer, had a sense of public duty. So, without a second thought, he bounded out of his room and rushed to the nearest telephone. In his hurry he opened the telephone directory, not knowing to whom to telephone, On one of the pages of the Directory was printed in bold letters "Dial 93—POLICE—in case of EMERGENCY." So, Gomes dialed 93 and at the other end, in the Control Room of Police Headquarters, the officer on duty alerted himself and received the message. In a few seconds an armed police party shot out of the Control Room, and proceeded in a wireless van towards the scene of occurrence.

Meanwhile, the culprits had completed their nefarious job and were driving towards Mount Road via Wallajah Road. There was no difficulty for the mobile police party to locate the taxi in which the culprits were fleeing, for Gomes had the presence of mind and resourcefulness to note down the number of the car before he went to telephone the Police. The Police party had spread its net out and the car with the miscreants drove straight into the arms of the law. The culprits were arrested. Subsequent investigation disclosed that the party was also responsible for other burglaries. Full marks to Gomes, who had passed his Civic test in Law and Order; thanks to him, the criminals were booked.

Night Hold-up

Gomes at least was a young man endowed with courage, resourcefulness and a strong sense of duty. Not so the man who on the night of 4th March 1952 was going along a road in Egmore in a rickshaw, with thoughts of building up a business of his own. He was, of course, a practical man and along with his thoughts he carried also various articles of grocery and other accoutrements with which he intended to open a coffee hotel, the next morning, in a busy locality. But someone else had other ideas about making money and getting rich quickly. This other body accosted our prospective coffee hotel proprietor and won his confidence. He took him along to a desolate road and suddenly attacked him. He deprived him of all his possessions, grocery and all, and sent him away walking.

The prospective coffee hotel proprietor, though meek was no martyr. Having shown that discretion was the better part of valour and having submitted himself to the hold-up man, he ensured his personal safety. Now, free from that threat, his mind began working; he began to act quickly now. He hailed a passing taxi and rushed to the Police Control Room. He narrated his experience to the officer there. It did not take long for the ever alert Police party with the wireless van to spot the robber and recover all the stolen articles intact. And now the robbed man is the owner and proprietor of a flourishing coffee hotel.

* * *

These are but two typical instances which show that with a little presence of mind and a civic sense, crimes could be detected or prevented. Not everyone, however, can be a Gomes or a prospective coffee hotel proprietor with even a belated sense of duty; very often when a crime is committed before our very eyes and sometimes even at our cost, many of us think, "Why all the bother of reporting to the Police and invite trouble and nuisance of appearing in a Magistrate's Court?" But this shirking of a primary duty to yourself and your fellow citizens, may cost you or your neighbour quite a lot.

HOW TO OPERATE

"DIAL 93" is quite easy to remember and operate in times of emergency like the ones narrated above. You may be the next victim; and you may find yourself in the unenviable position of being held up by desperadoes and robbed of your belongings. In such emergencies don't feel helpless and don't lose hope. In "DIAL 93"

there is a friend in need. All you have to do is to lift the receiver and spin just the two digits and you set into motion a high powered machine of law geared up for action against anti-social elements and law-breakers. It is, of course, the duty of the police always to maintain law and order. They are doing their duty and they will continue to do it. But they need just a little co-operation from YOU, the Public. All you have to do is, when you see a crime committed, report it: "Dial 93."

And now we will see how this magic number works all the miracles. It is very simple. It is just a scheme which ensures Police assistance to the public instantaneously. When you dial 93 you establish immediate contact with the special arm of the Police known as the Control Room. An armed party is always ready at that end and on the alert every day of the year, every hour of the day, and every minute of the hour. The emergency squads which go out to the "spots" have a system whereby they would be in constant touch with the Control Room and *vice versa*. This is done with the aid of a two-way radio apparatus through which contact is established. The Control Room is the nerve-centre of the organization which houses the Central Wireless Station and Information and Operations Rooms. The wireless cars which proceed out on detection duty are briefed and regulated with instructions and information from the Control Room.

To Protect Life and Property

The Emergency squads and the Wireless patrols do not exist only for the purpose of chasing motor car bandits or smash-and-grab men. Detection of crime is not their only job. They are there to protect human life and property and are at your back and call in times of need. If you see, suspect or are informed reliably that a crime has been committed, or is about to be committed, dial 93 immediately. Whether you phone from a public call office or from a private line, you can always get 93 without any difficulty.

Remember, the sooner you dial 93 the more difficulty for the criminal to make his getaway. The more popular "Dial 93" becomes, the tougher will become the criminal's job.

Every intelligent citizen will surely concede that the Police can do little if the public is apathetic. The Police are at your service and they do their job in your interests and unless you, as an individual citizen, take that little active interest in combating crime, the job of the Police becomes more difficult. The strong arm of law and order is stretched out for your own benefit. Take it in a friendly spirit and help the Police in liquidating crime and criminals.

"Dial 93" is at your service.

Criminal Courts in Madras State

The following are the salient features of the statistics of Criminal Courts in the Madras State for the year 1950 :—

Courts : The Judicial Officers employed in the State during the year 1950 and engaged wholly or partly in criminal cases were 16 High Court Judges ; 37 Sessions Judges (this includes one permanent Additional Sessions Judge, three Agency Sessions Judges, three Additional Agency Sessions Judges and five temporary Additional Sessions Judges) ; 40 Assistant Sessions Judges ; 25 Temporary Assistant Sessions Judges ; 41 District Magistrates including 20 Additional District Magistrates : seven Presidency Magistrates ; 97 Sub-divisional Magistrates, two City First-class Magistrates, one at Coimbatore and the other at Madurai ; 75 Additional First-class Magistrates (including District Munsifs-*cum*-First-class Magistrates) ; 477 Subordinate Magistrates consisting of Tahsildar-Magistrates, Deputy Tahsildar-Magistrates, Stationary Sub-Magistrates and other officers exercising magisterial powers ; 73 Special Magistrates ; and 17 Honorary Special Magistrates sitting singly. In addition, 181 Benches of Magistrates constituted from among 1,292 Honorary Magistrates, 1,520 Village Magistrates' Courts and 757 Panchayat Courts tried criminal cases.

Original Cases : The number of cases for disposal in Village Magistrates' Courts was 2,779. Of these, 2,171 were disposed of. The percentage of conviction was 37·47 as against 40·27 in the previous year. The cases against 764 persons out of 2,763 persons tried were compounded and withdrawn. The number of cases for disposal in Panchayat Courts was 3,046 as against 5,054 in the previous year. The number of cases disposed of was 2,326. The percentage of conviction was 34·49 as against 43·22 in the previous year. There was a fall in the number of cases instituted in the Presidency Magistrates' Courts from 163,710 to 152,322.

The number of persons under trial in the mofussil Sessions Courts was 7,165. Of these, nine died, 3,409 were acquitted or discharged, 2,394 were convicted, the cases of 176 persons were referred to the High Court. There were 46 cases for disposal in the High Court Criminal Sessions and 42 disposed of and four were pending at the end of the year. The average duration of cases disposed of was 41 days.

Appeals : Five thousand five hundred and four appeals concerning 8,523 persons were decided in Magistrates' Courts. The percentage of appellants whose convictions were set aside or against whom proceedings were quashed was 30·49 ; 562 appeals concerning 1,096 persons were pending at the end of the year. The number of appeals disposed of in mofussil Sessions Court, was 3,443 as against 3,100 in the previous year. In the High Court, 244 appeals were pending at the beginning of the year, 956 were preferred during the year, and 769 were disposed of, leaving 431 pending at the end of the year.

Crime : The number of offences under the Indian Penal Code reported in the year was 136,911. As regards the offences under the Special and Local Laws, there was an increase from 767,831 to 827,773. There was an increase of 12,025 cases under the Prohibition Act, 16,738 cases under the Motor Vehicles Act, and 13,471 cases under the City Police Act.

Punishments : The sentences and orders passed by Courts other than Village and Panchayat Courts on persons convicted were as follows : Death (Confirmed or imposed by the High Court) 67 ; Transportation 368 ; Rigorous Imprisonment 69,762 ; Simple Imprisonment 22,599 ; Forfeiture of property, in addition to other punishments 370 ; Without other punishments 4 ; Fine, in addition to other punishments 2,488 ; Without other punishments 780,463 ; Security to keep the peace, in addition to other punishment 856 ; Without other punishment 863 ; Security for good behaviour 3,492 ; Imprisonment in default of security for good behaviour 2,246.

Preservation of Fish by Pickling

By SRI R. VENKATARAMAN, M.SC., A.R.I.C., and SRI A. G. VASAVAN, B.SC.,
Fisheries Technological Station, Kozhikode

Fish is a highly perishable commodity. It starts putrifying the moment it is out of water and if no step for preserving it is taken it becomes inedible in the course of 16 hours. Various methods are in vogue for preventing the fish from spoilage. To mention a few, salting, pickling, smoking, dehydration, icing and refrigeration are practiced to a large extent. In India, icing and refrigeration are only in the infant stage. Each method of preservation has its advantages and disadvantages. The trade adopts a number of recipes suited to the taste of the consuming public of the locality.

The Fisheries Technological Station, Kozhikode, recently conducted some experiments to evolve a formula for pickling of fish in general, particularly sardines and mackerels, which could be carried out easily by the housewife on a domestic scale.

Method Outlined

The method adopted consists of the following steps: (1) Preparing a saturated solution of salt (brine). (2) Selecting absolutely fresh fish and gutting and cleaning it. (3) Adding the fish to the brine to which has been added spices and vinegar.

1. *Preparation of the brine.*—The brine should be kept ready prior to the purchase of fish and good quality salt which contains at least 92 per cent sodium chloride must be used. This may be dissolved in lukewarm water until no more of it goes in solution. The quantity of water to be taken and the salt to be used will depend on the amount of fish pickled. For every 100 lb. of water 33 lb. of salt will be necessary. This solution must be allowed to settle overnight and the insoluble substances in the common salt like mud will get deposited in the bottom. The clear solution above may be decanted and stored.

2. *The selection and dressing of the fish.*—The fish intended for pickling has to be selected with special care. The tainted or bruised fish has to be rejected. The fish is cut open and the intestines are removed carefully. Large fishes have to be sliced. Then the fish is washed well in fresh water removing all the blood stains.

3. *Pickling.*—Wooden barrels, earthen jars or glass vessels can be used for this purpose. For 100 lb. of fish about 120 lb. of brine will be necessary. This brine is first poured into the barrel. Vinegar (6 lb.), pepper powder (¼ lb.), curry leaves (¼ lb.), ginger (⅛ lb.) and garlic (1/16 lb.) are added and mixed well with the brine. The quantity of brine, vinegar and spices prescribed for 100 lb. of fish should be altered proportionately according to the weight of the fish used. The fish is then stacked in the brine and weights placed on the top so that the fish is always under the brine. The barrel is closed tightly.

Within a fortnight salt, vinegar and spices will penetrate into the fish muscle and a characteristic flavour will be observed. Afterwards this can be used for the table when necessary. The flavour and taste of the pickled fish as described above is found to be much better than that of ordinary salted fish, which is generally very hard and has a bitter salt flavour not relished by many. The muscle of the pickled fish is very soft. It contains about 65 per cent water and eight per cent salt whereas ordinary salt fish contains only about 40 per cent water and has salt content as high as 15 per cent to 20 per cent. The keeping quality of the pickled fish is also considerably better. It does not spoil as the result of mould or red attack.

Precautions

The following precautions have to be taken in storing the pickled fish. Vinegar is acidic and this acid atmosphere helps to preserve fish since most of the fish spoilage bacteria does not thrive in acid. But the spoilage products of the fish like ammonia which are alkaline gradually neutralises the action of vinegar and excess vinegar should be added every month. After some time this brine may become foul, because of the formation of spoilage organisms. Sometimes worms or larva may be noticed in the brine. If brine shows the signs of spoilage it should be changed adding fresh vinegar and condiments. This may be necessary after two months.

Pickling of Prawns.—They should be boiled in dilute brine (5 per cent) till they assume a pink colour and float on the surface. They should be ladled out, cooled and shelled. The pulp could be used for pickling as in the case of fish.

Preparation for the table.—The fish taken out of the pickle may be washed well and fried in oil, adding excess spices according to the taste. It can also be made into curry like fresh fish.

Corruption Cases

During the month of April 1952, one Assistant Surgeon was removed from service, one Stationary Sub-Magistrate was compulsorily retired and his pension reduced. Ten Constables were dismissed. One Field Surveyor was discharged from service. Three others were given less severe punishments.

During the month of May 1952, one Deputy Superintendent of Police was compulsorily retired, one Assistant Surgeon, one Head Clerk and one Typist in a District Educational Office and five Prohibition Guards were removed from service, eight Constables were dismissed and one Constable was discharged from service. The punishments awarded to five other persons were less severe.

Chillies: Combined Scheme Continued

The Government have sanctioned the continuance of the combined scheme for the multiplication of H.S. 9 tobacco seed and G1 chillies seed in the Guntur District during 1952-53.

The seeds produced in the scheme will be sold to the ryots for sowing, at the same rate as the departmental seeds of the same variety.

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Marketing of Fish

By Sri K. CHIDAMBARAM, Deputy Director of Fisheries (South), Madras.

In the reconstruction of the Far Eastern societies attention has to be paid to the native peasantry. They form an integral part of the economic fabric. Yet their needs have often been looked upon as more social and administrative than economic. Legal, educational, medical and nutritional problems have often been tackled without a full realization that these are bound up with fundamental difficulties of income, depending in turn on difficulties in the organization of marketing, the supply of capital and the technical utilization of resources. These problems have become more urgent with the entry of large-scale development by Western interests. The impact of new techniques of production, a more widespread use of money, a greatly increased range of consumer's goods and offer and a closer dependence on the price fluctuations of international markets in commodities are new factors challenging the traditional way of life of the peasant and set him problems of adaptation.

The more successful he is in inducing his economic universe and moving away from his basic subsistence economy, the more he is liable to be faced by insecurity. The claims of the peasant fishermen have got to be borne in mind; and they play an important part in the total economy in this part of the country. Their importance lies not only in their actual population, but also in their contribution to the economic and nutritional system of the community.

Problems of the Fishing Industry

Before the war the fishing industry was not ignored but by comparison with peasant agriculture, it was late in arousing official interest; the range of its problems was slowly realised, especially on the economic side, and the funds and personnel allotted to assist it were small. The fishing industry is not an easy one to help in any country and the problems are more difficult to tackle in this part of the world. Many of the fishing communities are small and scattered, most of them are relatively isolated. It is hard to disseminate ideas through printed material among fishermen and hard also to get personal contact with them, when they are so often at seas. Their many local variations of equipment, technique and organization make it difficult to work out a policy and adapt it to their requirements. All such factors in the past have tended to inhibit any speedy comprehensive plans for the improvement of their conditions.

In the planning of development of fisheries in any region, it is essential to understand the nature of the industry and its problems. It is necessary to know the answers for certain questions of a general nature. What is the productivity of the industry ? Is there full utilisation of the natural resources of the waters ? How efficient is the use of equipment and of labour ? What is the regularity of employment and what are their occupations ? How is capital supplied to the industry ? Is the industry under-capitalised or over-capitalised ? Are marketing facilities well developed ? How well are the consumer's interests served ? How do the income and standard of living of the fishermen compare with those of other groups ? Some aspects of these had been taken up, but very little detailed systematic work has been published on the subject.

Primary and Secondary Phases

When the development of fisheries elsewhere is viewed historically and its economic conditions considered carefully, it is seen that " progress has been and in the present form of civilization must be, from the independent fishermen with a single boat and petty local trade to the capitalist employer with his fleet of large boats and his wages paid crew...." and it will be so in this country, the more so because the actual seafaring fishing population in India is born and not made. These people are wanting both in the capital and the business capacity and intiative necessary for a real exploitation of the harvest of the sea.

The fishing industry, like others, is divided into primary and secondary phases, the primary phase indicating the activities concerned with actual fish production and the secondary phase concerned with the handling of the fish. This secondary phase of handling in fish relates to the various stages from the producer to the consumer and involves equipment for transport, storage, marketing and processing.

Fishery is conducted in two ways: (1) fishermen themselves engaged in fishing with their own boats and nets and (2) the capitalists who are interested in the fishing industry hiring labour from among the fishermen and entrusting them with all the fishing implements on share basis.

Credit System in Fishing Economy

There are three-main spheres in which the credit system is important in the fishing economy: (1) in financing the poor workers, especially during seasons of unemployment or low yield, (2) in facilitating the purchase of capital equipment and (3) in facilitating the marketing of the product, and they are:—

(1) *Through co-operative societies.*—Temporary loans from Rs. 50 to Rs. 250 are given to the fishermen according to the number of each man's shares in the society on personal security of some other members, and it is collected by instalments in full, in the course of one year. Some of the fishermen who are licensed fish curers in the Government Fish Curing Yards established throughout this coast repay their dues to the societies in the shape of cess.

(2) *Through boat owners.*—Boat owners generally advance money to the ordinary labour fishermen mostly on promissory notes to be repaid in the course of one year in cash from the income they get. The fishermen labourers are allowed half the share of the catches for their labour by the boat owners, the other half being enjoyed by themselves towards the fishing implements supplied by them. The first half given to the labourers are equally distributed among them; and then each labourer, if he is a debtor to the boat owner, gives a percentage of his share

towards his loan and thus adjusts it completely by the end of the year or renews the bond every year if the arrears are still pending.

(3) *Through capitalists.*—Some capitalists advance money to the boat owners on the security of the catches in the respective boats. On landing, the catches are surrendered to the capitalists who fix the price of the fish on the basis of demand and supply and either sell it or take it themselves for curing. The cost is paid to the boat owner then and there or sometimes within a week, taking a percentage of commission which is always likely to fluctuate according to circumstances. Thus the capitalists are actually benefited in both ways by getting the interest of the amount lent by them and also by getting a profit by the sale of cured fish. Until the loan, thus taken, is repaid in full to the capitalist by the boat owner, the above arrangements regarding the disposal of the catches will continue.

Channels of Disposal

The fishing on this coast of Madras State is not a purely subsistence occupation; it depends for its prosperity on market conditions. There are three principal channels of disposal of the catch viz.,(1) as fresh, (2) as dried and salted and (3) as manure.

It is estimated that less than 50 per cent of the total production is consumed fresh. A proportion of the catch is sold by the fishermen family, who remove the catch in baskets of various sizes frequently on head loads and take it direct to the retail markets or elsewhere or convey it to markets, where it is auctioned. The range of the fresh fish market, locally and in inland centres, is governed by the range of available means of transport varying from the *kavadi* to lorry and railway. Since fish will not keep fresh long in the tropics, speed is essential in supplying this market.

Another important type of market is for cured and dried fish. Curing and drying allows the fish to be transported great distances and held in reserve against periods of bad weather or seasons when fish are scarce; it also provides the means of dealing with the surpluses.

Functions of the Middlemen

The scope of the whole system of fish marketing has led to the development of various types of middlemen, who are often specialists as wholesalers or retailers, as handlers of fresh fish, or in cured and dried fish. The system of marketing is the most intricate and fascinating of all the aspects of this industry in India. The market is a diverse one, with middlemen of several types, each performing a specific function, though not exclusively. Moreover, the system is so fluid that as there is prospect for profit, people, who are normally producers or consumers, act for a time as middlemen; they are not regarded as infringing the privileges of any corporation. Marketing of the fish does not take place on any system of fixed or conventional prices, such as might be expected in a community attaching importance to traditional forms of social intercourse.

There are definite conventions, but they apply to the process of bargaining and not to the prices as such; they are characterised by great sensitivity of response to changes in supply and demand. While retail sales are for cash, the credit system is well developed for wholesale purchases. The capital of the middlemen is small and they tend to operate on narrow margins. The economic organization depends largely on production in other fishing areas, and growing facilities of transport and communications tend also to increase the inter-dependence of the different local markets.

Four Lines of Action

The Department of Fisheries, Madras, is tackling the problems relating to marketing mainly on four lines, viz., rapid handling, processing, setting up organizations and eradication of literacy. Before formulating the channels for marketing, a comprehensive knowledge of different consuming centres, markets, local conditions and customs is essential. To cite an instance, fish are not consumed by certain communities on certain days a week and in certain months. This lack of demand in particular periods in particular localities will direct the movements of fish for marketing. The various functions of marketing are assembling, grading, sorting, packing, storing, processing, transporting, distribution and sale.

The assembling, grading and sorting are usually done at the landing centre and the packing has to be done according to the type of market, the distance of the market from the landing centre and the mode of transport available and also the way in which the fish is desired by the consumer. In some places fish packed with ice are not liked, though it is the best way of arresting decomposition in fish within a limited time; some consumers cannot reconcile themselves to purchase fish which are gutted and cleaned, even though scientifically gutted fish keep better for a longer time and the decomposition does not set in for a long time.

Question of Packing

No doubt, it is necessary to educate the consumer and to remove all the prejudiced ideas from his mind. These points, which though apparently minor, can assist the producer in supplying better fish, and the consumer can get the benefit of a better quality of fish. The distance and the mode of transport influence the way of packing. It will be sufficient if fish is packed in ice in baskets for a shorter distance and when the container is not handled more than twice. Otherwise wooden containers will answer the requirements. If fish are to be taken for a longer distance, insulated boxes will be found necessary. If insulated van or railway car is available, packing may be in the simplest manner possible.

The ways in which the various difficulties met with at different stages of marketing by the Department in the landing, distribution and marketing of fresh water fish from Mettur to places within a radius of 250 miles are available for the fish merchants, and the successful experiments conducted in the packing and transport by the insulated van in the railway will be valuable lessons for the trade.

Transport of Fresh Fish

Regarding transport of fresh fish, the places where restricted facilities of communication by road are available, the Department is exploring the possibilities of running motor vans to assist the transport of fresh fish quickly and in time to reach the market at a reasonable cost. The

quantities of fish transported by Departmental vans in 1950 and 1951 were 400 tons and 845 tons respectively.

The information gathered by the Marketing section in the City of Madras revealed that on an average about 15 tons of fresh fish are received in the City every day; about 10 tons are brought by train from the West Coast. Now with the exploitation of the Mettur Reservoir through the Department about two tons of fresh fish come into the City. This supply has been increased by four tons by the provision of quick transport vans of this Department. This includes fish brought from Pulicat, Ennore, Lattice Bridge, Tiruporur, Covelong, etc. During the year 1951, more than 750 tons of fish were transported into Madras and these are transported at a nominal cost of about Rs. 15 per ton based on the distance and quantity. They are from producing centres to consumption centres where communication is not easy; this facility aids in bringing the fish to the market in time and this fetches a better price for the producer and gives a better fish to the consumer. The introduction of these vans constituted an improvement of the socio-economic conditions of the fishermen.

Programme of Development

Any programme of development of fisheries has to be treated broadly under these heads, viz., technical, economical and social. The various technical changes involving power fishing, increased production, extending the fishing intensity, better methods of preservation, transport and marketing will mean economic changes. Any radical change in the fishing industry will almost certainly lead to far-reaching changes in the way of life and social institutions of the fishermen, e.g., any system of deep-sea fishing would involve changing their established patterns of behaviour and economic relationship in the community. Where there is such a development programme, there will still be room for individual fishermen, but the men who secure larger boats and nets will face a more complex problem, one of the chief factors being the supply of capital. State assistance in some form would perhaps be necessary. In a few cases this may be done by direct cash advances in easy terms, but this system is open to gross danger that such advances may in fact go to improve the position of the middlemen instead of the producer.

A more effective way would probably be to make the capital advance in the form of actual equipment and to issue this to fishing units or associations of fishermen rather than to individuals. This might be combined with a form of co-operative investment in which the majority of the capital is put up by the State through the Fisheries Department while the fishermen themselves put in small amounts either by subscription or by allocation of a portion of their earnings.

Role of Co-operative Societies

It may not be out of place here to mention the potentialities of marketing through co-operative societies. Co-operative buying and selling is a world-wide movement varying largely in the degree in which it has become established in the different countries. Co-operative purchasing among farmers or City consumers has developed extensively in some countries, notably in England, Scotland and Sweden, while co-operative societies of farm products is most common in other countries, such as Denmark, Finland and Canada. The co-operative credit movement is extensively developed in Eastern countries such as Japan, China and India. A fair proportion of the retail trade in many European countries passes through co-operative channels, e.g., 1/5th of Danish, 1/4—1/3 of Finnish, 1/7th of British and 1/10th of Swedish. Wholesale houses organized on a national and international basis are also operated successfully by co-operatives. The result of the functioning of the various co-operative organizations in different parts of the world have indicated that:

(1) Co-operative principles can be successfully applied to the marketing of any kind of commodity, perishable or non-perishable, staple or non-staple, seasonably produced or continuously produced goods.

(2) The characteristics of the people are significant in determining the extent of co-operative organizations.

(3) Most successful co-operative organizations in different parts of the work are organized on a single commodity basis, but organization on a multiple commodity basis does not in the least spell failure.

(4) In most European and Asiatic countries co-operative agricultural credit associations were basic to co-operative marketing associations.

(5) Public policy in practically every nation of the world has favoured the development and progress of co-operative marketing.

(6) There is general acceptance of the principle of co-operation as adopted by the English societies.

(7) In many places, State control or positive State encouragement of co-operative marketing is found.

It will be quite appropriate here to mention the success of such working on products of fishing industries in Japan, Canada and Scandinavian countries.

Extent of Governmental Responsibility

In developmental activities there may be wide differences of opinion as to the scope of Governmental responsibility, some people holding that Government should leave the field to private enterprise, whilst others argue that Government should undertake the major work of this kind. It is probably a matter of degree of development of the industry at the time at which the scope for specific developmental measures is recognized; in some countries private enterprise leads strongly in such advances, in others Government may have to take a lead and provide stimulus to private enterprise.

Of this developmental work there are two special fields in which it is fairly obvious that Governments of this area may take a lead. These fields are: (1) the development of some form of organization in the industry, (2) the establishment of orderly marketing arrangements. It might be, and in some quarters is held, that these are essentially aspects of the same problem. There are three most illuminating instances of Governmental intervention to impose a form of orderly operation of the industry. These are those of Hong Kong, Batavia and Queensland:

Hong Kong.—The Hong Kong Government has set up a wholesale fish-marketing organization through which all fish must be sold; the fish is brought to market by th organization's own lorries and carrier vessels ing centres operated on behalf of the schem committees. The fish is auctioned and

of cost to the buyers' establishments. Loans, education and supply facilities are associated with the market organization. The ultimate assumption of control by the fishermen, co-operatively, is envisaged.

Batavia.—Government operates the Batavia fish market, through which all fish for Batavia must pass. The fish is brought to the market by a range of methods, over which Government exercises no control. Fish is auctioned. Loans, education, medical supply and other facilities are associated with the market.

Queensland.—Areas on the coast from Cooktown to Coolangatta have been declared Fish Supply Districts, and all fish taken in those areas must be sold through the Fish Board wherever depots are available. The Board maintains the metropolitan market in Brisbane, eight district markets and 11 depots in country centres. Of these, the metropolitan market, four district markets and four depots are the property of the Board, the remaining mark ts and depots being operated in rented premises with cold storage facilities. The Fish Board has a fixed price schedule for most species for fish and crustacea. Most of the professional fishermen have a contract with the Fish Board to take all their catches at the fixed price. A fisherman may, however, elect to send his fish to be auctioned if he is not satisfied with the schedule prices. During the glut season, if the cold storage capacity of the markets and depots is strained, Fish Board Officials will not guarantee schedule prices, and the fish, if sent to the market, are auctioned. Species of fish and oysters which are not listed in the schedule are auctioned. These arrangements mean that auctions are very infrequent, the fish bought by the Fish Board at fixed prices being allotted to the registered fish buyers of the market, as demand is always greater than the supply of fish available.

Wholesalers' Organization

The Hong Kong Wholesale Fisheries Organization has been started with the idea of converting it into a co-operative organization when the organization had been built up and the fishermen considered educated enough in the principles of Co-operation and the ideals of the scheme to handle it themselves.

All fish has to be sent to one or two fish markets for sale by auction. A deduction of eight per cent on all sales is made before payment is made to fishermen. This commission, as it is called, represents funds by which the organization and its subsidiary activities are financed. There is a skeleton staff of Government officers at this market but the majority are paid from the fish commission fund. When the fish is sold the fisherman can get his money on the day of sale. The organization undertakes to deliver fish to the buyer in the organization's own baskets, with the organization's own transport free of charge.

Work at the Syndicates

Fish is collected at " Syndicates " which are situated at the various fishing villages in the Colony. The staff of the Syndicate is paid from the eight per cent commission deducted from the sale of fish. It consists of a " Chairman " and a " Fish Caretaker " and office staff. The Chairman of the Syndicate is an employee of the Fish Marketing Organization appointed by the Director of Fisheries. His ...are mainly the general supervision and running of the v rious activities of the Syndicate. The fish caretaker checks the fish as it is delivered to the Syndicate, makes out a list showing the n me of each fisherman and the amount and kind of fish which he is sending to the market. He escorts the fish to the market, supervises the weighing and checking at the market, follows it through the auction noting the price and collects money on behalf of all fishermen who are unable to accompany their fish, and returns with it to the Syndicate.

The Marketing Organization has a fleet of 16 lorries and five motor fishing vessels launches to transport fish to the market. The cost of this transport is borne by the Marketing Organization, the fishermen being only liable to deliver their fish to the Syndicate.

To describe the organization from a Co-operative angle, the following may give an idea of how the set-up is planned so as to be able to be converted into a co-operative organization in the future. A syndicate consists of all fishermen who are based in that fishing village and use that village as their collecting point. At present, they are not members of the Syndicate, in the true sense of the word, but look upon it as a collecting centre. They can go from one Syndicate to another as weather and fishing grounds alter. In the future it is hoped that these Syndicates will become properly constituted Co-operative body of fishermen with a definite membership. The Chairman will be elected by them and they will have their own staff doing their duties of Secretary, Treasurer and Committee members.

Chanos Fish Seed Collection at Adyar

The Government Fisheries Department have made arrangements for collecting and transporting fresh water fish seed from Adyar. Chanos, a kind of marine fish popularly known as ' Milk Fish ' appeared in large numbers in the Adyar backwater tracts, soon after the heavy rains. The breeding season for this fish is usually from April to October and during this period, the young ones of this fish (fingerlings or seeds as they are called) swarm in large numbers in the backwater tracts. Several lakhs of them are collected every year by the Government Fisheries Department and arranged to be stocked in all the inland waters of the State.

For the first time in Madras, an attempt in this direction is being made at Adyar. For the period ending June 15, 1952, a total number of 50,000 fingerlings of this fish were collected and stocked in the departmental demonstration tanks in the City. Before being stocked in the inland waters, they are subjected to a process of acclimatization to fresh water and conditioning for long transport.

This particular fish feeds mainly on plankton and filamentous algae and is found to grow well in fresh water. It grows in a year to about 15 inches in salt water, 19 inches in brackish water and 25 inches in fresh water. The rapid growth, non-cannibalistic habit and rich flavour make this species admirably suited for culture in fresh waters. It thrives very well in temple tanks where planktonic growth is abundant. It is expected that two lakhs more of these fingerlings will be collected before the season is over, for stocking the tanks and the reservoirs in the interior districts and for supply to pisciculturists.

CHANOS FISH SEED COLLECTI ⊃N

The Government Fisheries Departme collect the fresh water fish seed Chan ('Milk Fish') from the Adyar bac waters, stock them in departmental tan and then send them for stocking inlar waters in the State.

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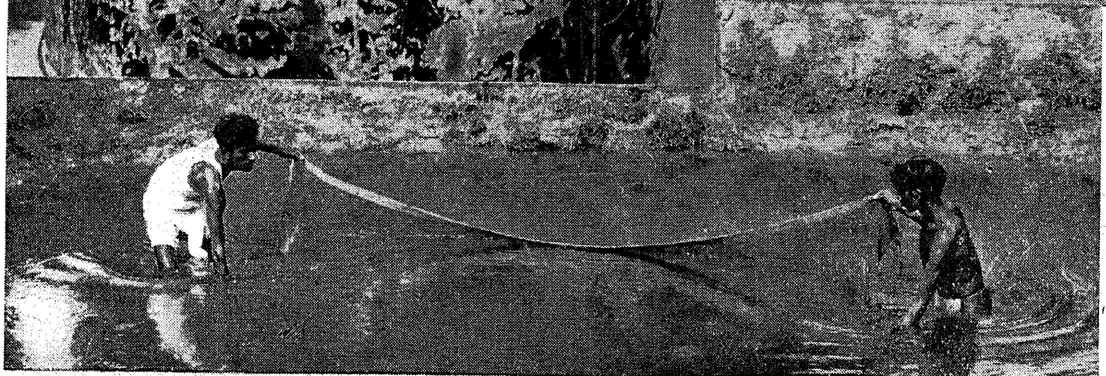
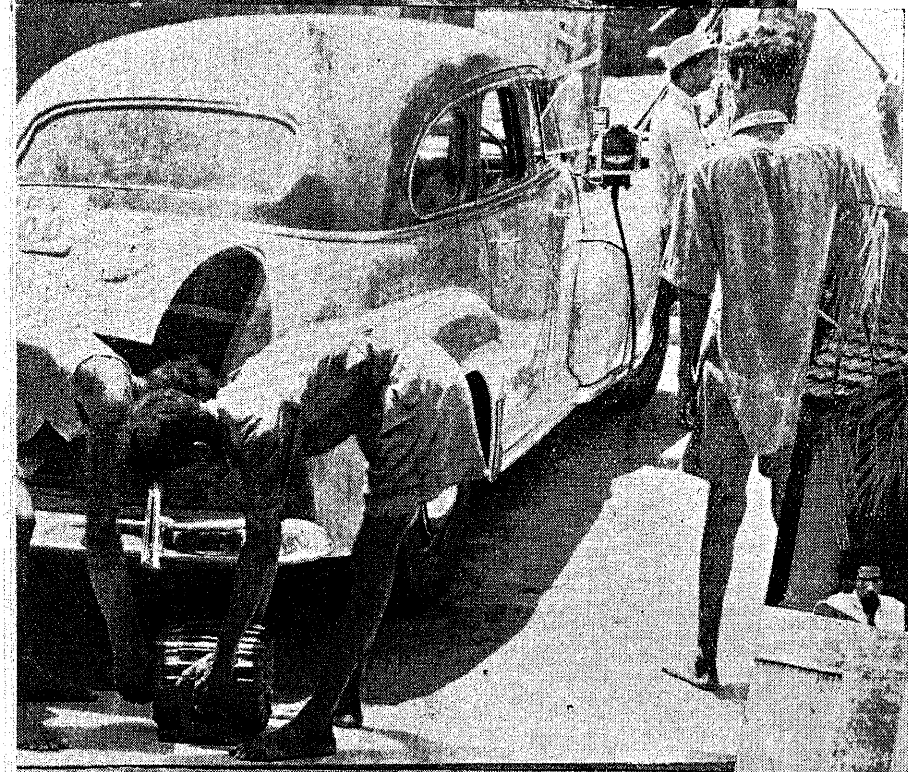


Pictures show (*top* *bottom*): 1. Collectin Chanos fish seed. 2. Th collecting vessel. 3. Stoc ing in the departmen tank for acclimatizatio 4. Collecting from the tan 5. Transporting by lor to inland waters.



DIAL 93—

Left (top to bottom):

1. The gang at its work. They are pilfering some electrical gear and apparatus.

2. The gang is removing the stolen articles in a taxi.

3. A conscientious citizen who notices the crime reports it to the Central Control—Dial 93.

4. '93' records the details.

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RECONSTRUCTION OF A CRIME

Right (top to bottom) :

5. The mobile squad is alerted and sets out on the chase after the gang.

6. The gang cornered and caught redhanded.

7. The gang is brought to the police station for questioning and enquiry.

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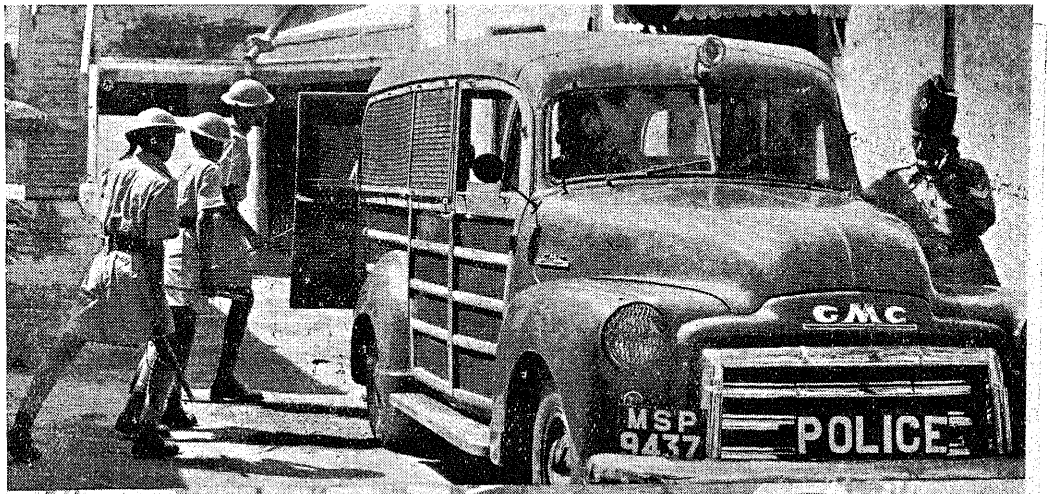
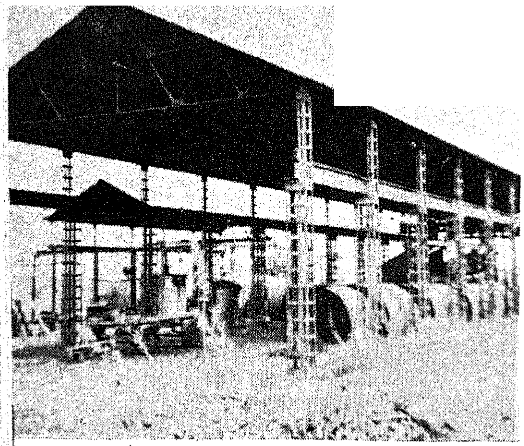
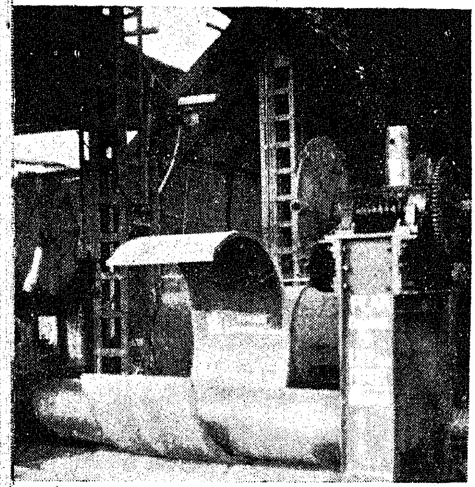


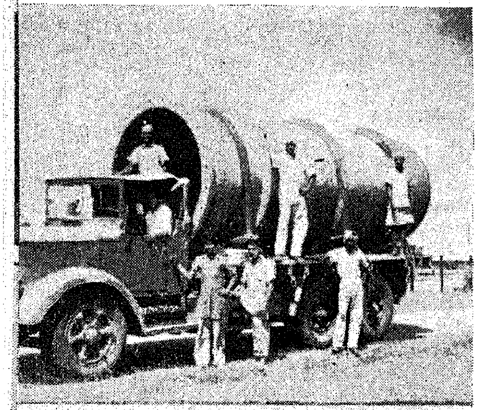
PIPELINES FOR MOYAR

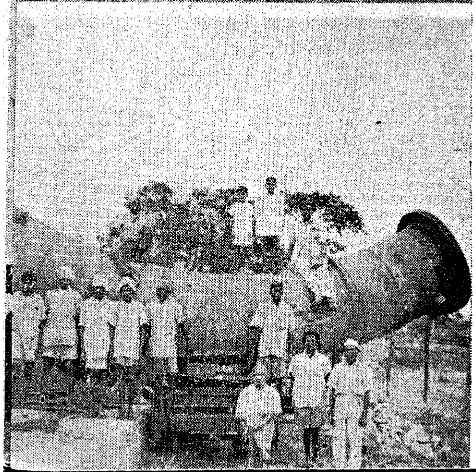
Left (top to bottom): 1. Portion of the factory where pipes are manufactured. 2. Rolling machine, where straight plates are rolled into circular shape. 3. Transporting a pipe on a lorry. 4. Transporting a bend pipe on metre guage trolley.

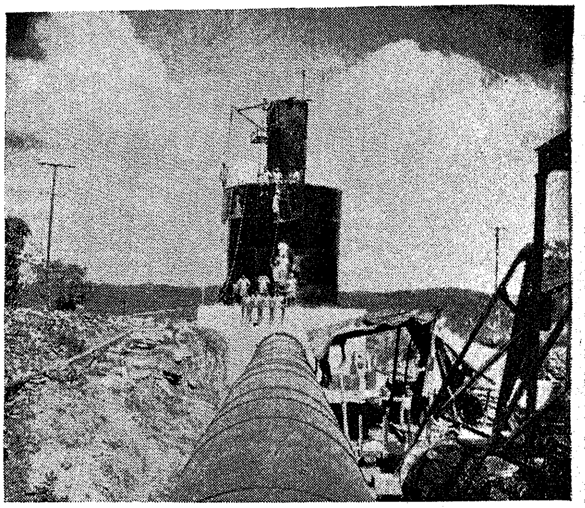
Right (top to bottom): 1. The Surge Tank. 2. Pipelines on the hill slopes. 3. Penstock pipes near powerhouse.

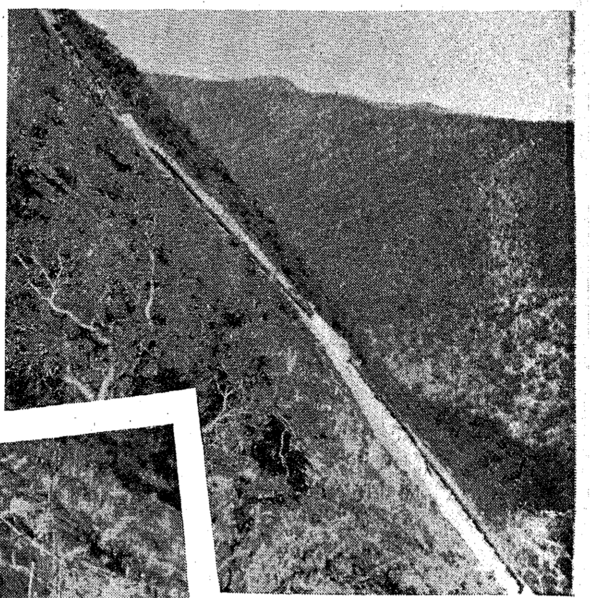


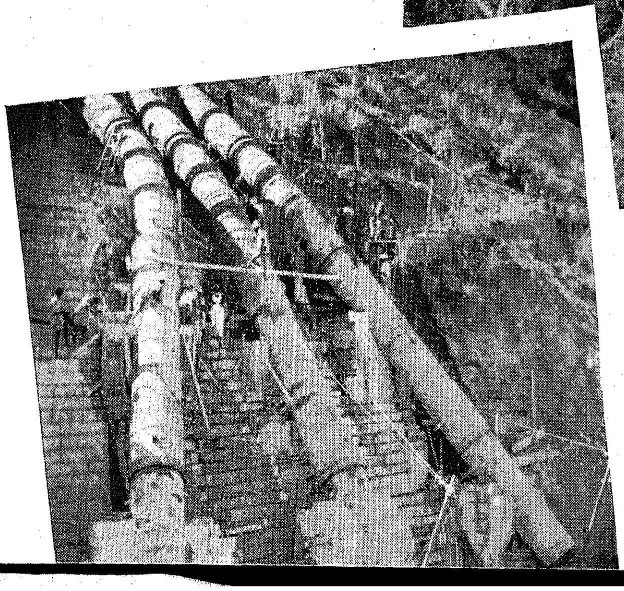












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Pipelines for Moyar

The Moyar generating station, the fourth hydro-electric station in the State, is situated in the Moyar Valley in Nilgiris District about ten miles north of the Pykara Power Station. The water after power generation at Pykara is utilised again for power generation at Moyar through necessary diversion and storage works and pipelines.

The water so diverted from the Pykara Station is impounded in a small lake called the Forebay from where it is taken in steel pipes laid down on the hill slopes to the Powerhouse 1,250 feet below for running the generating units. The ultimate installed capacity at Moyar station will be about 36,000 K.W. comprising three units each of 12,000 K.W.

Pipelines.—The pipeline consists of a Low Pressure Pipeline from the Forebay, a surge tank and three penstock lines, each pipe to feed one machine (vide sketch).

The portion AB in the sketch is called the Low Pressure Pipeline. It is made of ½″ thick steel shells of 7′ 0″ internal diameter and about 688 feet long, and leads into the surge tank shown at location B. The purpose of the surge tank is to absorb the sudden depression or high pressure that may occur in the pressure pipes due to the sudden opening or closing of the valves near machines when load is thrown in or thrown out.

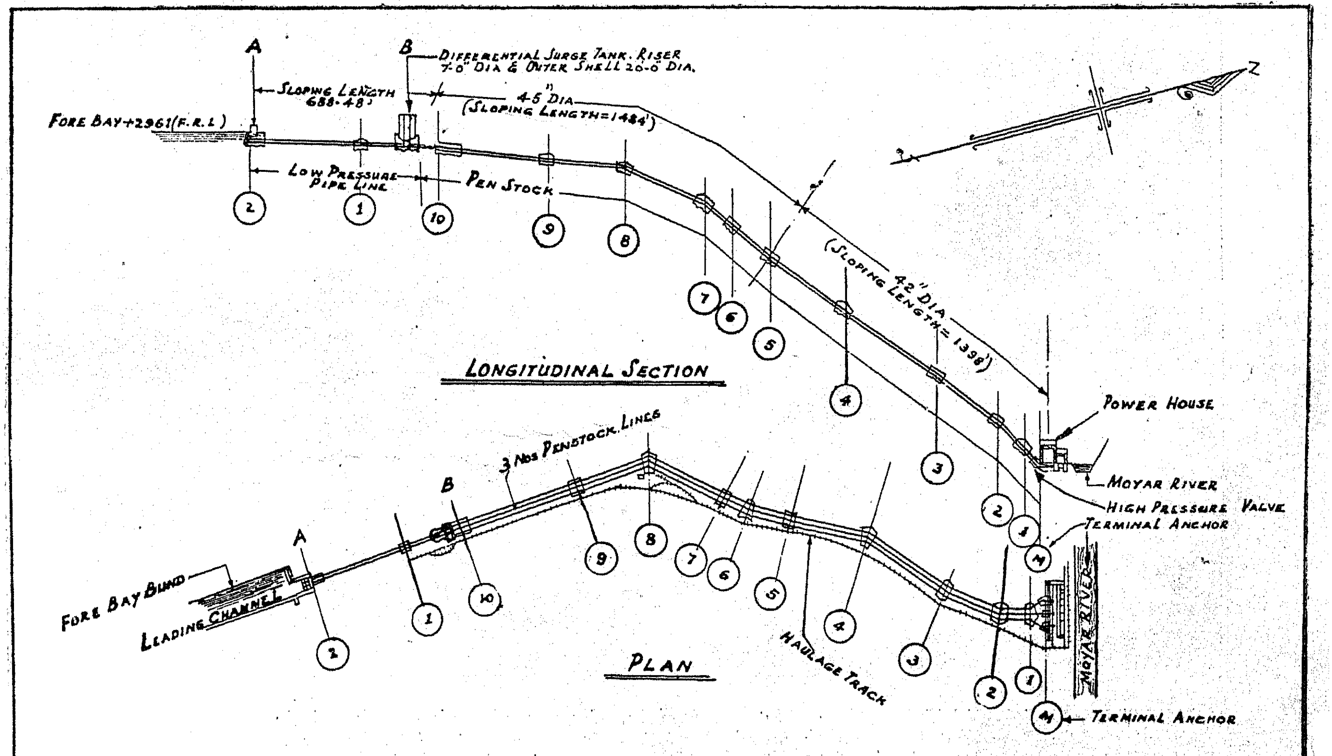
After the surge tank the seven feet diameter pipe divides into three branches running along the hill slope, each branch leading to one of the three turbines at the Powerhouse. These pipes are called penstock lines. The length of each penstock line is about 2,880 feet. The upper reach of the penstock line, for about half the length, is of 45″ internal diameter and the lower reach of 42″ internal diameter. Water flow in the penstock lines is controlled by necessary valves located at both ends, viz., near the Powerhouse as also the beginning of the penstocks. Several bends are introduced in the pipelines to suit the profile of ground on the hill slopes and such bends are firmly held down to the foundation by huge concrete blocks reinforced by steel rods. These concrete blocks are called "anchors" and are indicated with serial numbers 1 to 10 in the sketch.

The fabrication and supply of steel pipes and special bends and pieces were done by Messrs. India Hume Pipe Company, Bombay. They had set up a factory at Moyar Camp for manufacturing the pipes. The pipe making was mostly done by machines operated by electric power supplied from Pykara.

The transport of the pipes from the factory to the site and their erection at site have been and are being done departmentally. The construction of the Low Pressure Pipeline, surge tank and the first penstock line with necessary valves and controls are completed and this is now feeding the first generating unit which was commissioned into service on 10th April 1952.

The erection of II and III penstock lines is in progress and is expected to be completed shortly.

The cost of the entire supply of pipes is about Rs. 30 lakhs and the estimated cost of erection of these pipes is about Rs. 2 lakhs, thus making a total of Rs. 32 lakhs for supply and erection.



Moyar Hydro Electric Scheme- LayOut Of Penstock Lines.

Electricity: Review for May

A review of electricity work done in May 1952 is given below:—

Machkund Hydro-Electric Scheme.—Land acquisition proceedings were in progress and lands still remain to be handed over. All bridges and culverts in Lamptaput-Machkund headworks road were completed and in Soguru-Jalaput road 6 miles 7½ furlongs have been metalled and further works on bridges and culverts were progressing. In diversion dam 35 per cent of masonry and 41·4 per cent of excavation have been done. In flume channel 64·7 per cent of work has been done so far. In tunnel pond dam excavation in left flank was progressing and 567 units of masonry has been done besides 59 units of bucket and apron concreting.

In flume tunnel 1,273 feet length has been concreted and further work was proceeding. Trimming of pipe tunnel and laying of concrete for surge shaft and excavation for invert portal open cut for pressure tunnel were progressing. Grading of valve house was nearing completion and work on penstock slopes was in progress. Extension of haulage track up to anchor No. 2 has been done and further extension work was continued.

Levelling of powerhouse area has been completed and foundation excavation for the powerhouse building was in progress. Excavation for main dam and Jalaput was continued. Construction of permanent buildings at Onukedelli and temporary buildings at Jalaput was in various stages of progress. Total labour force during the month was 5,406.

Moyar Hydro-Electric Scheme.—All civil works from headworks to powerhouse have been completed. The first unit was in commercial service during the month, giving much needed relief to the hydro systems. The second and third penstock lines remain to be completed in the lower reaches near the powerhouse end. Erection work on 2nd and 3rd unit was continued. Erection of switchgear under Moyar bay at Pykara Powerhouse was progressing.

Pykara III Stage Extensions.—At the Pykara dam, construction of masonry for the main dam and wing walls was continued. Work on R.C.C. core wall for the earthen dam was also in progress. The erection of the 4th penstock line at Pykara was already completed. Erection of the differential surge tank was nearing completion. Foundations for the powerhouse extension at Singara were completed and the erection of steel structures remain to be taken up.

Madurai Thermal Scheme.—Component parts of coiler materials for the 10,000 K.W. set were being received and stacked. Collection of materials, earthwork excavation and flooring were under progress for the cooling pond work. Concreting for the 10,000 K.W. set of R.C.C. raft for turbine foundation has been completed.

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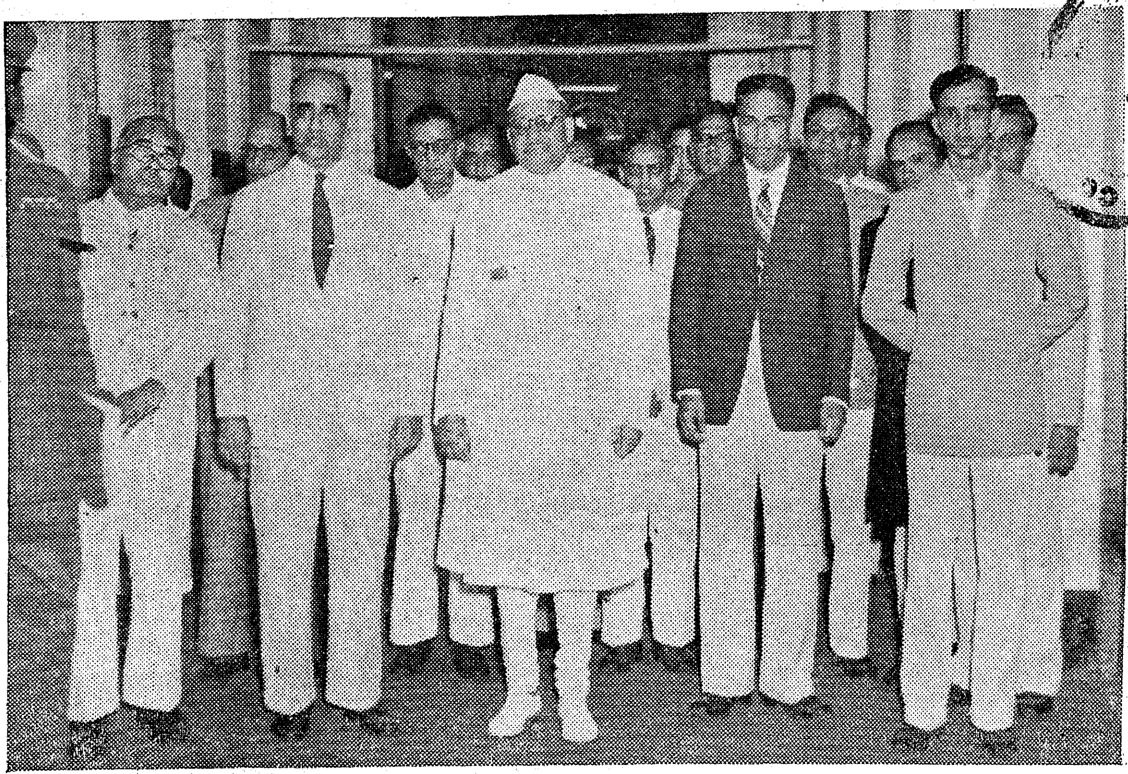


ELECTRICITY ENGINEERS MEET: Shri Sri Prakasa, Governor of Madras, addressed the Sixth Annual Meeting of the Government Electricity Engineers' Association. At the meeting Sri G. Sundaram, Chief Engineer for Electricity, outlined the details of the Five-Year Plan for the generation and distribution of electricity, and declared that Madras led all States in rural electrification, with 2,230 villages having power supply.

South Kanara Scheme.—Realignment in certain reaches in 33 KV. lines was in progress.

Tungabhadra Hydro-Electric Scheme.—Drilling operations for the investigation of soil at canal powerhouse site were in progress. Reconnaissance was made for getting suitable soil for the hearting of the forebay bund. Trial pits were being excavated in the foreshore of Kamalapuram tank.

Staking of tower locations was completed and the position of tower footings were being marked out in the field for lines surveyed. Preparation of tree and land schedules has been completed for a length of 149 miles out of 342 miles.

Madras Plant Extensions.—The fabrication of the steel work for building has been completed except for chequer-plated walkeys which are held up because of non-receipt of chequer-plates from the mills. The rolling shutters have been received and are being erected. Boiler No. 4 was commissioned on 12th May 1952. Work on boilers 2 and 3 was progressing. Work on turbo alternator, mechanical coal handling plant, switchgear and central evaporatory plant were in various stages of progress.

Vijayavada and Visakhapatnam Powerhouse Extensions—Vijayavada.—Civil works were progressing.

Visakhapatnam.—Erection of the 7th stanchion was completed. Roofing with A.C.C. sheets and necessary trusses and bracings were over. These complete the south side extensions. Work on west side extensions and 6th boiler foundation were being taken up.

Nellore Thermal Scheme.—Staff quarters at Gudur Sub-station was progressing. Sewage and drainage arrangements were completed at Nellore Sub-station except for minor works. Sub-station structure work was progressing.

Operation Branch

Hydro areas.—The water conditions in hydro areas continued to deteriorate. A further cut of 25 per cent was imposed during the month, bringing the total cut to 50 per cent on all but essential consumers.

The hydro systems continued to run in parallel with the Madras Electricity System. The number of units generated, peak load and services connected during the month in the three hydro systems were as follows :—

Name of System.	*System peak load in KW.*	*Generation in millions of units.*	*Services connected.* *Agricultural.*	*Industrial.*	*Domestic.*
Pykara	35,500	17·37 7·16 *	77	..	202
Mettur	36,800	7·65	43	..	127
Papanasam	17,500	5·17 2·26 †	36	..	339

* 7·16 million units were generated at Moyar Powerhouse.

† 2·26 million units were generated at Madurai Thermal Station during the month. The Moyar Powerhouse with a peak load of 12,800 KW and Madurai Thermal Station with a peak load of 3,500 KW were giving relief to the three hydro systems.

(Electricity Review continued overleaf)

Improvements to Udipi Thermal Station

The Udipi Electrical Undertaking, which was managed by a private company till May 31, 1951, was taken over by Government under the Acquisition of Electricity Undertakings Act, 1949, on June 1, 1951, with a view to improve the supply conditions in the town which were very bad at the time. A scheme for installing two additional diesel generating sets at the existing powerhouse and extending supply to prospective consumers in villages round about Udipi was sanctioned by Government at a cost of Rs. 10·2 lakhs initially rising to Rs. 13·01 lakhs in five years. The first diesel set of 224 KW. operating under this scheme was commissioned on July 21, 1952. Erection work on the second set will be taken up shortly and when completed the power position at Udipi will ease considerably.

It may be mentioned that the present expansion of the Udipi Thermal Station is only to meet the power requirements for the next three to four years, by which time hydro power from the Jog system of Mysore is expected to be made available for the whole of the South Kanara District.

Rural Electric Loads

The Government have approved the relaxation, with effect from July 15, 1952, the re-grouping restrictions on agricultural and other rural loads, in force under the orders dated July 2, 1952.

N.G.Os. and their Families: Free Diet and Drugs in Government Hospitals

The Government have ordered that Non-Gazetted Government Officers of this State and their families, who are admitted in State medical institutions, should be exempted from the payment of diet charges and the entire cost of special and expensive drugs administered to them.

The Government have also ordered that employees of local bodies, drawing salaries not exceeding Rs. 300 per mensem, should be given the same concessions as are admissible to State Non-Gazetted Officers, in the matter of medical treatment, when admitted in the State medical institutions. These orders take effect from April 1, 1952.

The position before the issue of these orders was as follows :

The Non-Gazetted servants and their families were elegible under the Madras Medical Attendance Rules, for free medical aid when admitted to Government medical institutions, including free accommodation, nursing and medical advice, free X-ray examination and treatment and free surgical treatment. They were required to pay diet charges and full or half the cost of special and expensive drugs, which were not ordinarily or normally available at the Madras Medical Stores Depot, Madras, and which were not among the drugs considered as indispensable for general practice.

In the Madras Electricity System, 45 D.C. services with an approximate connected load of 86·9 K.W. were changed over to A.C. supply.

During the month 78 extensions were sanctioned by Chief Operation Engineers and Chief Engineer at an estimated total cost of Rs. 35,22,200.

Thermal areas and Ceded Districts.—The Madras system continued to give relief to hydro systems except during peak load hours in the evening.

The generation, peak load and the number of services connected up during the month in the several areas were as follows :—

Name of System.	*Peak load in KW.*	*Units generated in millions.*	*Services connected.*		
			Agricultural.	*Industrial.*	*Domestic.*
1 Madras	28,000	14·27	14	23	246
2 Vijayawada—					
Steam	8,007	3·898	20	1	26
Diesel	..	..			
3 Visakhapatnam—					
Steam	3,990	1·504	2	12	198
Diesel	1,100	0·132			
4 Kakinada	720	0·008	3	..	144
5 Rajahmundry	598	0·004			
6 Narasaraopet	80	0·016	..	..	12
7 Srikakulam	100	0·016	..	..	..
8 Ongole	96	0·019	..	..	10
9 Narasannapeta	14	0·003	..	..	..
10 Nellore	800	0·261	..	1	12
11 Proddatur	102	0·026	1	2	83
12 Kurnool	330	0·101			
13 Anantapur	150	0·045			
14 Cuddapah	230	0·075			
15 Nandyal	125	0·021			
16 Tadpatri	65	0·011			
Power purchased from Mysore.					
17 Hindupur	239	0·076	8	2	130
18 Ceded Districts	2,928	1·255			

Inter-Departmental Meeting on Statistical Co-ordination

At the first Inter-Departmental meeting on Statistical Co-ordination, held at the Committee Room at the Secretariat on July 24, 1952, Sri K. Ramunni Menon, Chief Secretary to Government, presiding, the Economic Adviser initiated a discussion with the representatives of 24 departments on technical points in the agenda, which included such items as the nature and description of the primary data collected, schedules used in the collection of statistics and the scope for their improvement, type of personnel engaged in the collection of the statistics and their qualification, and the lines on which statistical or economic surveys, if any, are conducted.

The 24 departments which were represented at the meeting included the Engineering, Industries and Commerce, Police, Prisons, Registration, Medical Services, Co-operation, Animal Husbandry, Labour, Port, Controlled Commodities, Public Health, Municipal Council and Local Boards, Revenue, Road Traffic Board, Public Instruction, Agriculture and Fisheries.

In the course of his opening speech, the Chief Secretary stressed the increasing importance in a Welfare State of statistics, the compilation of which requires the skill of competent experts. He added that Governmental organizations and Governmental activities existed for the good of the people. He pointed out that it was possible to represent statistics, which had been regarded by many people as an exceedingly dry collection of mass figures, in a way in which every schoolboy would be able to understand it. Whatever is collected should be easily understandable to everyone and should also be comprehensive.

The Economic Adviser said that the Karnam is the primary source of information and therefore if the primary data is correct, then only the interpretation can be correct.

Sri C. S. Krishnamoorthi and Sri K. Kondal Rao, Board of Revenue, Sri V. K. Parthasarathy, Public Health Department, Sri V. Dattatreyan, Office of the Industries and Commerce Department, and Sri K. Chidambaram, Department of Fisheries, took part in the discussions.

Extension of Electricity

Supply of electricity was given on August 7, 1952 to Kalugumalai in the Palayamkottai firka, Tirunelveli District.

Loan Instalments

The Government have directed that the collection of loan instalments in the areas which are affected by drought and remission of kist granted in Fasli 1361 in South Arcot District be postponed to Fasli 1362.

8 OCT 1952

Indian Trade Unions Act

The following are the important features in the working of the Indian Trade Unions Act, 1926, in this State during the year 1951–52 :—

1. The Commissioner of Labour continued to be the Registrar of Trade Unions.

2. At the beginning of the year, there were 579 unions on the register. During the year, 194 unions including 13 whose registration had been cancelled were registered and 140 unions were deprived of registration. The total number of unions registered since their commencement of the Trade Unions Act up to 31st March 1952 was 1,429, of which 633 were on the register at the end of the year.

3. The membership of registered trade unions slightly increased from 174,608 at the beginning of the year to 189,491 at the end of the year. The balance in the General Fund Account of the Unions has increased from Rs. 4,33,225 to Rs. 6,24,934.

4. As in previous years, many of the unions failed to submit their annual returns even though notices explaining their obligations under the Act were issued to them. The concession of free official audit has been withdrawn from the accounting year 1951–52.

5. Agricultural labour continued to be slow in organising itself into trade unions. At the end of the year there were eight registered trade unions against six at the beginning of the year. Only six unions submitted their returns for 1951–52 and the total number of membership of the unions at the end of the year was 1,458 against 1,354 at the beginning of the year.

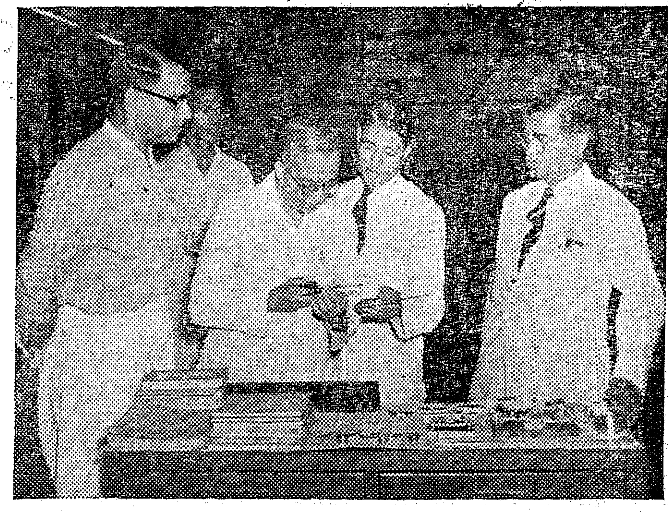
Post-War Services Reconstruction Fund

The Government of Madras have nominated the following to be the members of the Committee of Administration of the Madras share of the Post-War Services Reconstruction Fund for a term of three years from August 14, 1952 :—

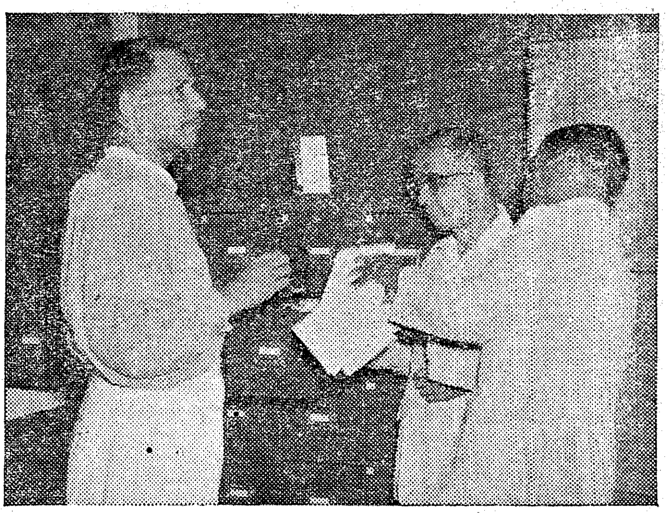
Shri Sri Prakasa, Governor of Madras—*Chairman*; Dr. U. Krishna Rao, Minister for Industries and Labour; Dr. A. Lakshmanaswami Mudaliar; Dr. Rm. Alagappa Chettiar; Sri A. Appadurai Pillai; and the General Officer Commanding, Madras Area.

Dearness Allowance in Textile Mills : Committee's Suggestion Accepted

The Government have accepted the recommendation of the Tripartite Textile Enquiry Committee that the dearness allowance to the workers in textile mills, which is now being paid at less than three annas per point be raised to three annas per point over and above 100 points of the Madras City cost of living index number with effect from 1st April 1952. The Government have commended this recommendation to the managements of 20 specified textile mills in the State for adoption.

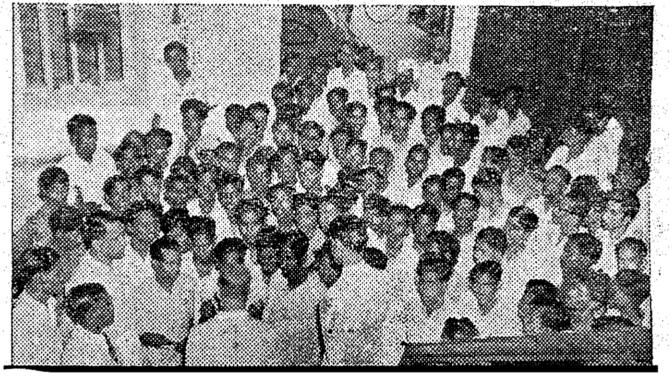


PRECISION INSTRUMENTS : Dr. U. Krishna Rao, Minister for Industries and Labour, examines some of the precision instruments manufactured by the trainees at the Industrial Training Institute, T'Nagar, Madras.



INDEX CARDS : The Minister for Industries and Labour examines the Index Cards in the Live Register maintained at the Regional Employment Exchange, Madras.

EMPLOYMENT SEEKERS : A large number of employment-seekers gathered in the Employment Exchange premises, and represented their problems and grievances to Dr. U. Krishna Rao.



Britain Controls Foot-and-Mouth Disease

By JOHN HARRIS of the *Farmer and Stock-Breeder,* London.

The vast majority of informed opinion in Britain believes that the slaughter policy remains the best means of controlling foot-and-mouth disease in the United Kingdom. Research into other methods is continuously being undertaken, but for the moment there is no practical alternative to slaughter, and moreover, the policy has stood the test of time.

Britain began the slaughter policy, which involves killing infected animals and those that have been in contact with them, in 1892. The amount paid in compensation to owners of slaughtered animals has averaged over the past 25 years no more than £ 170,000 a year. Compare that with the £ 83,000,000 which this disease is estimated to have cost Germany in the 1937-38 series of outbreak alone. Britain's worst year was 1923 when compensation amounted to £ 2,200,000 and there were 1,929 outbreaks which involved the slaughter of 128,000 cattle, sheet pigs and goats.

A relatively bad epidemic has been raging in Britain since last November ; there have been about 450 outbreaks and 55,000 beasts have been slaughtered. But this is a tiny fraction of the 34 million cattle sheep and pigs in the United Kingdom. The loss to an individual owner is tragic, and money cannot replace valuable breeding animals—the work of a lifetime—but viewed nationally the loss has been remarkably small.

Movement Restricted

When the disease does appear in Britain—there is strong circumstantial evidence that migratory birds are an mportant source of infection—an "infected area" is immediately declared around the farm in question. Stock movement is restricted, infected animals are slaughtered all those that have been in contact are traced. This last may be a big task especially if an infected animal has been in market. But day and night it goes on.

The slaughter policy is not, of course, peculiar to Britain. It is followed in the United States, Canada South Africa, Norway, Sweden, Eire and so on. In countries where it has not been followed, the disease appears so frequently that slaughter cannot be enforced for economic reasons.

Vaccination is the usual alternative to slaughter, but the trouble with vaccination is that there are several types of foot-and-mouth disease and no vaccine fully effective against all of them has yet been developed. And it is expensive.

It is true, of course, that vaccination will reduce losses in countries where the disease is endemic and which have land frontiers, but it is just as true that at present it is no substitute for eradication where that is possible.

Britain has taken a lead in the campaign against this most contagious disease, not only by preventing it from becoming established in her own territory, but also by supporting strongly the team of scientists at the Foot-and-Mouth Research Station at Pirbright in the English country of Surrey. This institution, which supplies serum all over the globe, is the only one in the world, which, in addition to carrying out systematic research in its own laboratories and in various parts of the world, functions as a place of international reference to help other countries which are less favourably placed.

COMBATING FOOT-AND-MOUTH DISEASE : During an outbreak of foot-and-mouth disease in Britain, stringent precautions to avoid the spread of infection are put into operation. Here farm workers are disinfecting their shoes before going into the farm.

Training Classes for Farmers

With a view to popularise improved methods of agriculture, to educate conservative agriculturists on the application of organic and inorganic manures in economic doses and to obtain quick results by direct mass contact with the villages, training classes were conducted at several convenient centres in each taluk of all the districts.

Anantapur.—In Anantapur District, training courses were conducted in 68 centres; 1,390 persons including village officers and Revenue Inspectors attended the training classes. During the training course, instructions were given on (1) kinds of soils and their formation, (2) kinds of manures, their preparation and uses, (3) improved strains of seeds and their preservation and (4) plant protection. Examinations were also conducted at the close of training classes and prizes were awarded to the best trainees.

North Arcot.—In North Arcot District, training courses were held in 128 centres and 6,426 persons attended the classes. The trainees were enthusiastic ryots, school teachers, Revenue Inspectors and village officers. Instructions on improved methods of agriculture, application of organic and inorganic manures, preparation of compost, etc., were given to ryots.

South Arcot.—In South Arcot District, such training classes were conducted in several centres in each taluk. The advantages in adopting improved methods of agriculture were explained to the persons who attended the training classes. Instructions on the formation of soils, use of improved ploughs and seeds, preparation of rural compost, utilization of green manures and plant protection were given to the ryots, village officers, Revenue Inspectors, etc., who attended the classes.

Chingleput.—In Chingleput District, training classes were conducted in 38 centres in all the taluks and there was great response from agriculturists and village officers. With the help of Agricultural Department, instructions were given on climate and seasonal conditions, manuring of crops, use of improved strains, plant protection, cultivation of cotton, green manuring, efficient use of oil engines and pumpsets, etc.

Chittoor.—In Chittoor District, short training courses were conducted in convenient centres of the district. During the training classes, lessons were given on subjects in season and rainfall, soils and their classification, improved implements and their economic uses, improved seeds, manures, plant protection, etc. Enthusiastic local ryots, Revenue Inspectors, elementary school teachers and village officers who attended the classes were very much benefitted by the lessons.

Coimbatore.—In Coimbatore District, similar training classes were conducted in firka headquarters and in public meetings. Besides the Revenue Officials, leading ryots, village officers and teachers, officials of the Co-operative Department also attended the classes. Various subjects such as climate, soils, manures, implements, improved seeds, horticulture, fodder and subsidiary occupation were discussed and instructions were given during the classes.

East Godavari.—In East Godavari, training classes were conducted in six centres and instructions were given on improved methods of agriculture. Revenue Inspectors and other subordinates attended the classes.

West Godavari.—In West Godavari District, training classes were conducted in two centres of each firka of the district. The courses were attended by the officers of Revenue Department, besides enthusiastic ryots, village officers and school teachers. During the courses, the subjects dealt with were climate and season, soils and manures, implements, seeds, insect pests, horticulture, subsidiary occupation, etc. About 5,000 (in total) persons attended the classes and the response is reported to be fair.

Guntur.—In Guntur District, training classes were held in convenient centres and instructions given on subjects like climate and season, soils, manures, implements, seeds, irrigation, plant protection and subsidiary items, etc.

South Kanara.—In South Kanara District, training classes on improved methods of agriculture, application of organic and inorganic manures, preparation of compost pits, etc., were conducted and the classes were held in 31 centres of the district. About 708 persons (289 village officers, 300 ryots, 19 Revenue Inspectors and about 100 elementary school teachers) attended the classes.

Krishna.—In Krishna District, training classes were conducted in important villages of all taluks. The Revenue Officers of the respective taluks, village officers, and influential ryots attended the training classes. Instructions on subjects like mechanised cultivation, improved seeds, fertilisers, green-manuring, plant protection work and cattle were given to those who attended the classes.

Kurnool.—In Kurnool District, training classes were conducted in 21 centres. During the courses, Taluk Supply Officers, Revenue Inspectors, village officers and ryots were present. The training classes enabled the trainees to understand the scope and working of the intensive cultivation schemes. The need for planting Glyricidia and Sesbania to step up production was also explained to those who were present during the training classes.

Malabar.—In Malabar District, training classes were conducted in 50 convenient centres and there was a large attendance of village officers, elementary school teachers, Revenue Inspectors and enthusiastic ryots during the training courses. The instructions imparted in the classes included all aspects of agriculture and improved methods of farming. Different kinds of manures, pest control, compost preservation and use of green manure were explained to those who were present during the classes.

Madurai.—In Madurai District, the training classes were conducted in all the taluks in 37 centres. About 1,546 persons attended the training classes. Instructions on seasonal operation, control of soil erosion, compost making, tractor ploughing, Sesbania planting, improved method of agriculture, application of organic and inorganic manures, use of improved implements, control of pests and diseases, selection of seeds, horticulture and subsidiary industries were given to the ryots. Village officers were also present at the classes.

Nellore.—In Nellore District, the training classes were conducted in 23 centres. Village officers, Revenue Inspectors and elementary school teachers attended the training classes. Revenue Inspectors were given training on rural compost preparation. Demonstrations on rural compost making were also conducted. Instructions on intensive cultivation schemes, methods of assessment of the results, general survey on climate, soil moisture, improved implements, improved seeds, pest control and application of chemical manures, etc.

Nilgiris.—In the Nilgiris District, training classes were conducted in most of the villages. Elementary school teachers, enthusiastic ryots, Revenue Inspectors and village officers attended the training classes. Subjects that were dealt with in the training classes were crop competition, soil formation, preservation of soil fertility, manures and intensive manuring schemes, selection of good seeds. Detailed instructions were given on these subjects and there was a great response from elementary school teachers, ryots, Revenue Inspectors, Firka Supply Officers and village officers.

Ramanathapuram.—In Ramanathapuram District, training classes were conducted in 19 centres of all taluks and about 450 persons (officials, teachers and public persons) attended the training classes. The training classes were conducted by the Agricultural Demonstrators.

Salem.—In Salem District, training classes were conducted in 63 centres. The training classes were conducted by the Agricultural Demonstrators and were attended by Revenue Inspectors, village officers and ryots. Printed pamphlets on various subjects such as vegetable cultivation, fruit cultivation, etc., were distributed to the trainees.

Tanjore.—In Tanjore District, training classes were conducted in 54 centres of all taluks and about 910 persons including Revenue Inspectors and village officers attended the training classes. In a number of places where training classes were conducted, mirasdars and school teachers also were present. In all classes lessons on soil and climatic conditions pertaining to the district, the nature of crops that could be grown, Grow More Food schemes and targets fixed for the district were dealt with. Instructions on preservation of farmyard manure, rural compost, growing of improved paddy strains, importance of using chemical fertilisers, use of green manures, growing cotton in rice fallows, growing Sesbania and Glyricidia in wet lands and economic planting of paddy were imparted. Special emphasis on plant protection was also laid during the classes. The technique of accurate assessment of increased yield was also explained to Revenue Inspectors and village officers. Propaganda films on agriculture were also shown during the training classes. The conduct of the training classes generally had a beneficial effect not only on the Revenue staff but also on others who attended the classes.

Tiruchirappalli.—In Tiruchirappalli District, training classes were conducted in all the taluk headquarters of the district. Revenue Inspectors and village officers attended the classes. The classes were addressed by the District Agricultural Officer and instructions on the application of organic and inorganic manures, preparation of compost, etc., were given to the Revenue Inspectors and village officers. Training classes at firka level were also conducted for the benefit of enthusiastic ryots, elementary school teachers and others interested in the schemes.

Agricultural exhibitions on a small scale were also conducted when the preparation of compost was demonstrated and the activities of the Department explained in detail.

Tirunelveli.—In Tirunelveli District, training classes were conducted in two important centres in each of the firkas of the district. In 94 centres, such training classes were conducted. In all the classes, lessons on soils, manures, seeds, irrigation, pests and diseases, individual crops, horticulture and subsidiary occupation, etc., were given to those who were present. Written as well as oral tests were conducted by the Agricultural Demonstrators and certificates were issued to those who completed the training successfully. Attendance in all centres was satisfactory.

Visakhapatnam.—In Visakhapatnam District, training classes were conducted in 26 centres. In these classes, Revenue Inspectors, Firka Supply Officers, elementary school teachers and many enthusiastic ryots were present. Lessons were given on climatic conditions and their effects on various crops, soils and their suitability for different crops, important Grow More Food schemes, horticulture, subsidiary occupation, improved methods of agriculture, mechanised agriculture, etc. These training classes had given an incentive to the farmers to adopt improved methods of agriculture. Small exhibitions were also arranged during the training classes.

Srikakulam.—In Srikakulam District, training classes were conducted in 39 centres. During the training classes, tahsildars, Taluk Supply Officers, Firka Supply Officers and village officers and ryots were present. The training classes were conducted by the Agricultural Demonstrators and instructions on intensive cultivation schemes were imparted.

Soil Conservation for 6,000 Acres

The Government have sanctioned a scheme of soil conservation and land improvement with contour bunding as its main feature as a famine relief measure in respect of an area of 6,000 acres in Mulanur firka, Dharapuram Taluk, Coimbatore District. The work is expected to be completed within a period of six months. The scheme is a model one for the district and the Government have emphasised the fact that it is the responsibility of the ryots to see that similar contour-bunding work is taken up extensively in the dry and wind-swept parts of the district.

Wells : Time-Limit Extended

On representations made to Government for extension of the time-limit for completion of wells subsidised under the New Well Subsidy Schemes, 1948-49, 1949-50, 1950-51 and 1951-52 beyond 30th June 1952, the Government consider that, in view of the adverse seasonal conditions of last year, an extension of time should be granted in respect of the two latter schemes, viz., the New Well Subsidy Schemes, 1950-51 and 1951-52, and accordingly direct that time-limit for completion of wells be extended till 30th June 1953.

The Government also direct that steps should be taken for the recovery of subsidies granted under the New Well Subsidy Schemes, 1948-49 and 1949-50, in cases where the wells were not completed by 30th June 1952.

Address Your Enquiries for Any Information You Need

Designation of the Officer.	*Jurisdiction.*	*For matters relating to*
Executive Engineer (Food Production), Central, Madras.	Chingleput, North Arcot and South Arcot.	Works taken under Tank Improvement Schemes.
Executive Engineer (Food Production), Madurai.	Madurai, Tiruchirappalli, Tirunelveli and Tanjore.	
Executive Engineer (Food Production), Ramanathapuram.	Ramanathapuram ..	
Supervisor of Industries	Each district	Supply of H.B. sets of power drills, drilling wells for irrigation.
Compost Development Officer	Office of the Inspector of Municipal Councils and Local Boards.	Advice regarding manufacture of rural and urban compost.
Executive Officer of the Panchayat or Commissioners of Municipalities.	Each district	Supply of urban compost.
Secretary of the Local Co-operative Society.	Do.	Supply of urban compost if distributed through co-operative societies.
Deputy Registrars, Coimbatore, Erode ..	Coimbatore	Supply of chemical fertilisers. Iron and steel on agricultural implements and obtaining Government fallow lands on lease for cultivation of food crops. Obtaining of credit facilities for purchase of pump sets, sprayers and offer of improved agricultural implements.
Deputy Registrars, Madurai, Dindigul ..	Madurai	
Deputy Registrars, Tirunelveli and Tuticorin.	Tirunelveli	
Deputy Registrars, Vellore and Tiruvannamalai.	North Arcot	
Deputy Registrars, Cuddalore	South Arcot	
Deputy Registrars, Chingleput and Tiruvellore.	Chingleput	
Deputy Registrar, Cuddapah	Cuddapah	
Deputy Registrar, Madras	Madras	
Deputy Registrar, Ootacamund	Nilgiris	
Deputy Registrar, Ramanathapuram at Madurai.	Ramanathapuram ..	
Deputy Registrars, Salem and Dharmapuri.	Salem	
Deputy Registrars, Tanjore and Kumbakonam.	Tanjore	
Deputy Registrars, Tiruchi (South) and Tiruchi (North).	Tiruchirappalli ..	
Executive Engineer	Each district	Enquiries relating to the execution of major irrigation schemes.
Assistant Director of Fisheries, Vellore.	North Arcot, Chittoor and Chingleput.	Fish seed collection and stocking supply of fish seeds, transport and marketing of fish, supply of processed prawns and supply of yarn to fishermen at subsidised rates.
Assistant Director of Fisheries, Madurai.	Madurai and Nilgiris	
Assistant Director of Fisheries, Tanjore.	Tanjore, South Arcot and Tiruchirappalli.	
Assistant Director of Fisheries, Tuticorin.	Tirunelveli	
Deputy Director of Fisheries, Madras North, South and Special.	Madras	All matters relating to fishery development and intensive cultivation schemes.
Fishery Marketing and Information Officer, Madras.	Madras and Salem District (Mettur Dam).	Transport and marketing of fish.
Special Officer, Craft and Tackle, Madras.	Madras	Improved fishing craft and tackle and construction of mechanised boats.
Assistant Director of Fisheries, Mettur Dam.	Salem	The supply of fresh and salted fish from Mettur Dam. Free fish cultivation advice.
Joint Director of Agriculture (through District Agricultural Officers).	Whole of Madras ..	Supply of oil engines and electric motor pumpsets under hire-purchase system.
District Agricultural Officers in all districts except Coimbatore.	Each district	Hiring of tractors, bulldozers, allied implements, oil engines and petrol pumps. Sale of pipes and fittings and used petrol sets. Service for installation of new oil engines or repairs to oil engines or tractors owned by ryots.

Designation of the Officer.	*Jurisdiction.*	*For matters relating to*
Regional Assistant Agricultural Engineer.	..	All technical advice on Agricultural Engineering matters on price information.
Research Engineer, Coimbatore	Coimbatore	All information regarding new and labour saving implements and tools for agricultural operations, their uses, advantages and other matters connected with research in Agricultural Engineering.
Assistant Agricultural Chemist, Government Malt Factory, Lawley Road P.O.	Coimbatore	Sale of malt extract with shark liver oil.
Executive Engineer, Chepauk, Madras ..	Chingleput Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Tanjore	Cauvery Division ..	
Executive Engineer, Tanjore	Grand Anicut Canal Division.	
Executive Engineer, Tanjore	Vennar Division ..	
Executive Engineer, Tiruchirappalli ..	River Conservancy Division.	
Executive Engineer, Cuddalore	South Arcot Division.	
Executive Engineer, Tiruchirappalli ..	Tiruchirappalli Division.	
Executive Engineer, Madurai	Periyar Division ..	
Executive Engineer, Ramanathapuram.	Ramanathapuram Division.	
Executive Engineer, Palayamkottai ..	Tirunelveli Division ..	
Executive Engineer, Vellore	North Arcot Division.	
Executive Engineer, Mettur Dam ..	Salem Division ..	
Executive Engineer, Coimbatore ..	Coimbatore	
Agricultural Demonstrator	Each taluk of all districts.	Granting agricultural loans, supply of seeds, fertilisers, agricultural implements, pesticides, literature on agricultural implements, etc.
Collector	Each district	For the construction of tanks, reclamation of waste lands and installation of oil-engines and pumps or any other purpose which will enhance permanently the agricultural value of land. Up to Rs. 5,000. Other agricultural objects such as purchase of fodder, construction of cattle sheds, purchase of carts for agricultural purposes of manure, purchase of appliances for raising water, purchase of appliances like sprayers and dusters for control of crops pests and diseases.
Revenue Divisional Officer	....	For purchase of seeds, cattle for agricultural purposes. Rs. 1,000.
Tahsildar	Each taluk of the district.	For relief of distress to enable owners and occupiers to subsist until next harvest. Rs. 200.
Secretary of the co-operative society of of your village.	....	(*a*) *Short-term* loans for cultivation expenses. (*b*) *Medium-term* loans for purchase of cattle and bulls, land improvement, digging wells, etc. (*c*) *Long-term* credit, first mortgage of land Rs. 10,000 per individual; Rs. 15,000 per individual in special areas.
Deputy Registrars of Rajahmundry and Kakinada.	East Godavari ..	Supply of chemical fertilisers. Iron and steel on agricultural implements and obtaining Government fallow lands on lease for cultivation of food crops. Obtaining of credit facilities for purchase of pump-sets, sprayers and offer of improved agricultural implements.
Deputy Registrars of Guntur and Bapatla.	Guntur	
Deputy Registrars, Nellore (North) and Nellore (South).	Nellore	
Deputy Registrar of Anantapur	Anantapur	
Deputy Registrar of Bellary	Bellary	
Deputy Registrar of Chittoor	Chittoor	
Deputy Registrar of Eluru	West Godavari ..	
Deputy Registrar of Vijayavada and Machilipatam.	Krishna	
Deputy Registrar of Kurnool	Kurnool	

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Designation of the Officer.	Jurisdiction.	For matters relating to
Executive Engineer (Food Production), Visakhapatnam	Srikakulam and Visakhapatnam.	Works taken under Tank Improvement Schemes.
Executive Engineer (Food Production), Eluru.	West Godavari, East Godavari and Krishna.	Works taken under Tank Improvement Schemes.
Executive Engineer (Food Production), Nellore.	Nellore and Guntur.	Works taken under Tank Improvement Schemes.
Executive Engineer (Food Production), Chittoor.	Chittoor, Cuddapah and Salem.	Works taken under Tank Improvement Schemes.
Assistant Director of Fisheries, Visakhapatnam.	Srikakulam, Visakhapatnam and East Godavari.	Fish seed collection, stocking and supply of fish seeds, transport and marketing of fish, supply of processed prawns and supply of yarn to fishermen at subsidised rates.
Assistant Director of Fisheries ..	Krishna, Guntur and West Godavari.	Fish seed collection, stocking and supply of fish seeds, transport and marketing of fish, supply of processed prawns and supply of yarn to fishermen at subsidised rates.
Assistant Director of Fisheries, Anantapur.	Anantapur, Cuddapah, Bellary and Kurnool	Fish seed collection, stocking and supply of fish seeds, transport and marketing of fish, supply of processed prawns and supply of yarn to fishermen at subsidised rates.
Fishery Marketing and Information Officer, Madras.	All districts ..	Transport and marketing of fish.
Assistant Agricultural Engineer, Soil Conservation Scheme, Bellary.	Bellary	Soil conservation and contour-bunding practices.
Principal, Agricultural College, Bapatla.	Bapatla	All information regarding new and labour-saving implements and tools for agricultural operations, their uses, advantages and other matters connected research in Agricultural Engineering.
Executive Engineer, Vizianagaram ..	Visakhapatnam North Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Vizianagaram ..	Visakhapatnam South Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Nidadavole ..	Godavari Western Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Dowlaishwaram ..	Godavari Eastern Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Dowlaishwaram ..	Godavari Central Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Vizianagaram ..	Grow More Food Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Vijayavada ..	Krishna Eastern Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Vijayavada ..	Krishna Central Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Guntur	Krishna Western Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Vijayavada ..	Guntur Division	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Vijayavada ..	Vijayavada Division	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Bellary	Bellary Division ..	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Madanapalle ..	Madanapalle Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Kurnool	Kurnool Division ..	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Nellore	Nellore Division ..	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Executive Engineer, Kandukur	Rallapad Project Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Deputy Registrar, Malabar (North) and Kozhikode.	Malabar (South) ..	Supply of chemical fertilisers. Iron and steel on agricultural implements and obtaining Government fallow lands on lease for cultivation of food crops. Obtaining of credit facilities for purchase of pumpsets, sprayers and offer of improved agricultural implements.
Assistant Director of Fisheries, Kozhikode.	Malabar	Fish seed collection, stocking and supply of fish seeds, transport and marketing of fish, supply of processed prawns and supply of yarn to fishermen at subsidised rates.
Special Officer, Craft and Tackle, Madras.	Madras	Improved fishing craft and tackle and construction of mechanised boats.

Designation of the Officer.	Jurisdiction.	For matters relating to
Superintendent, Fisheries Technological Station, Kozhikode.,	Malabar	Semi-dried prawns—manufacture and supply.
Executive Engineer, Kozhikode	West Coast Division.	Matters pertaining to the execution of Intensive Cultivation (Irrigation) Schemes.
Deputy Registrars, Mangalore and Kasaragod.	South Kanara ..	Supply of chemical fertilisers. Iron and steel on agricultural implements and obtaining Government fallow lands on lease for cultivation of food crops. Obtaining of credit facilities for purchase of pumpsets, sprayers and offer of improved agricultural implements.

Drawbacks in the Kale Spinning Machine

Several enquiries are being received about spinning machines manufactured in India. Perhaps the following information regarding the Spinning Machine manufactured by Sri Kale may be useful. The Committee appointed to consider the problem relating to production and supply of yarn to the Handloom industry has given the following opinion regarding this machine :—

"Sri Kale's spinning unit with 10 spindles which is a finished model and which is capable of being run by one operator after short initial training in any home of the cotton-growing area, where electric power is available, producing more than 2 lb. of 20 yarn per 8 hours' shift, is a unit that should be popularised."

The Textile Commissioner, however, reports that the Auto-Spinner suffers from the following defects :—

(i) High cost approximating to Rs. 1,500 per machine which would be beyond the reach of even a well-to-do weaver, particularly when it is considered that yarn spun on it during eight hours would be sufficient to feed only one loom;

(ii) the wages earned by a spinner would comparatively be low and would not constitute a living wage in the urban, semi-urban areas where it could be worked;

(iii) judging from the results of tests incorporated in the penultimate paragraph of the Committee's Report the yarn spun on Kale's units will be rather uneven and noppy besides containing kitties. The preparatory processes, namely, carding, roving and drawing in the Auto-Spinner are not the same as these obtaining in the mills, while the blowroom processing is completely eliminated. Consequently the yarn spun by it will be inferior to mill-spun yarn in quality and strength variations in count and tensile strength will also vary very widely.

In view of the above, the yarn may not be as much useful for weaving on handlooms as mill-spun yarn unless superior type of cotton is used. This would mean increased cost of production. Some other experiments are being carried on at different centres. The results are not finalised.

Gift of Mattresses for Hospital

The Government have accepted with thanks the gift made by Sri Keshereddy Balarami Reddy, Sawayapalayam, Kavali, of four cotton mattresses and four cotton pillows for use in the maternity ward of four beds, for the Government Hospital, Kavali.

Price of Milo Reduced

Under the revised food policy, the Government of Madras have *inter alia* decontrolled and derationed the distribution of milo but price control is retained. There is no limit on the quantity of milo that a consumer can purchase.

In order to make available milo at cheaper rates to consumers the Government of Madras have decided to reduce the prices of milo and issued orders that milo should be sold to wholesalers at Rs. 8–8–0 per imperial maund with immediate effect. This reduction in price will be given effect to on the stocks now with the wholesalers. Consequent on this reduction in the price, the retail price to consumers will be about six annas six pies per Madras measure. The actual retail price may vary from place to place depending on transport charges, etc. and these retail prices will be fixed and notified by District Collectors. The retail sale price should not exceed the rate fixed by the Collector.

As the distribution of milo is completely decontrolled and derationed except for price control, it is open to fair price shop-keepers or to any trader intending to deal in milo in retail, to obtain milo stocks from wholesalers at the revised rates and distribute to the consumers at the revised rates fixed by Collectors.

The public are informed that ample stocks of milo are available with the Government and they desire that the consumers should take advantage of the reduction in price and purchase as much quantity as they require. In view of the substantial reduction in price it is hoped that the merchants will take up the trade in milo more effectively than hithereto, so that it may conveniently be made available to consumers everywhere in the State even outside the fair price shops. In fair price shops milo will continue to be made available as usual.

Order Cancelled

The Government have rescinded the order relating to the ban on the movement of foodgrains into the Kasaragod Taluk from other taluks in South Kanara District.

South Arcot Lignite

By Dr. C. V. S. RATNAM, PH.D., Member, Expert Committee, Lignite Investigation.

Part II—Utilization

Until the discovery of large deposits of it in South Arcot District in Madras State, lignite was practically unknown in our country. The term "Lignite" itself was not comprehensible to a large number of us until recently. The South Arcot lignite deposits have been under active investigation by the Government of Madras and India since 1947.

The lignite, a member of coal family, is different from the most commonly used variety of coal in India, bituminous coal, in three ways. The moisture content in lignite is relatively high, sometimes over 50 per cent. Lignite when mined and exposed to atmosphere, disintegrates into small pieces, as the moisture in it evaporates into the air. It is not possible to produce large blocks of coherent coke by heating lignite out of contact with air, as is done in the case of bituminous coal. The lignite of South Arcot contains 35 to 45 per cent moisture. The abovementioned special nature of lignite gives rise to various doubts and speculations in the minds of lot of people as to the utility of lignite in domestic and industrial fields. These doubts are due to the lack of experience with lignite in this country.

If we consider for a moment the amount of industry built up in Germany with brown coal (lignite) as basis all these doubts do not arise. One of the most important fuels available in Germany is brown coal and this coal is put to a great number of uses and was greatly responsible for the German leadership in various fields of industry. Large amounts of lignite are also being used in Australia, U.S.A. and Canada.

Fuel or Chemical Raw Material

Lignite can be looked upon both as a fuel and as a chemical raw material. As fuel and as chemical raw material lignite finds many and varied uses.

Many forms of lignite are used as fuel. Combustion Engineering developed means for burning natural lignite in furnaces producing steam. Natural run of the mine lignite containing moisture up to 37 per cent is being burned in furnaces now in operation in the U.S.A. This lignite is also used for domestic stokers. The most common types of equipment used for burning this natural lignite are spreader strokers, travelling grates and pulverised fuel burning equipment. Recently the Consolidated Edison Company of Chicago developed what is called a "Cyclone Burner" in which coal of sizes up to an inch are fed to the burner and the molten ash is slagged off. The burner is very compact and the present units are built so that a single unit can produce enough steam for 100,000 K.W. generator. Experiments were conducted in this Cyclone Burner with lignite, especially from North Dakota, U.S.A. These tests are successful and Cyclone Burners can be usefully employed for burning lignite, where large power stations are required. The South Arcot lignite, very similar to U.S. lignites, can be used in this burner.

Because of the high moisture content of lignite and the consequent low heat content per unit of fuel, the distance over which a natural lignite can compete successfully with bituminous coal with lesser moisture content is limited due to freight rates. In North Dakota, U.S.A., the approximate distance over which natural lignite can successfully compete with bituminous coal is around 250 miles from the mine site. Conditions in South India are different. The bituminous coal mines of the North are nearly 1,000 miles away from most coal consuming centres in the South and this aspect of freight rates is not likely to play an important role in the development of South Arcot lignite mines. The existing industry in the South is being starved of coal supplies and practically no new industry can be started here for want of power. The hydro-electric power in use in South India is also in short supply due to the growth of consumer demand and the failure of monsoon over a long period of time. Lignite from South Arcot mines, if put on the market at a reasonable price, will prove a boon for the industrialization of South India.

In a Processed Form

To distant markets lignite can be supplied in a processed form. Much of the moisture in natural lignite can be taken out at the mine site itself, and the upgraded product can be sent to larger distances than is possible with natural lignite. This is being done in Australia, where a steam drying process called "Fleissner's Process" is being used to dry lignite without at the same time obtaining any disintegration of lignite during the process of drying. Extensive work on this process has been carried out by the United States Bureau of Mines and the process was found successful as far as American lignites are concerned. This can very well apply to South Arcot lignites. Dried South Arcot lignite can be sent all over South India to meet growing fuel demands in this region.

Lignite briquettes have extensive markets in Germany, Australia, Japan, Europe and to some extent in the U.S.A. Here powdered and dried lignite is compressed by pressure into small briquettes. To help this compression a binder, usually asphalt pitch, is added in a large number of cases.

Briquettes are Ideal Fuel

The special nature of German brown coal makes it possible to briquette it without the addition of any extraneous binder. Thus the briquetting cost is very much reduced, because in briquetting lignite with binder, the binder is a very expensive item. Experiments conducted on South Arcot lignite in Germany and Switzerland showed that it can be briquetted without a binder, a very welcome property considering the fact that we have to import asphalt binders from abroad and that the present cost of such materials is about Rs. 450 per ton.

Lignite briquettes can become ideal fuel for domestic purposes and for existing industries using high grade coal and for buses running on charcoal, if these briquettes are partially carbonized at about 800°F. The carbonization yields low temperature tar from which can be obtained a large number of chemicals, wood preservatives and petroleum products and carbonized charbriquettes. The raw lignite has a heating value of 6,500 to 7,000 B.T.U.

per pound whereas the carbonized briquettes will have a heating value of about 11,000 to 12,000 B.T.U. per pound and will in no way be different from high grade coals. The carbonized briquettes will have good burning qualities and can be used for bus and lorry transportation and as a smokeless fuel for household purposes. Handling problems will become very simple with carbonized briquettes.

Carbonization Process

Last year, a process for drying and carbonizing lignites was developed by the United States Bureau of Mines. This process, incorporating the latest knowledge in engineering practice, promises to be a very successful way of processing lignite. The Aluminium Corporation of America is now constructing a plant in Texas designed by the engineers of the United States Bureau of Mines. This plant will carbonize about 7,000 tons of lignite every day producing char for power plant use and low temperature tar from which petrol and other by-products will be obtained. This process has great potentialities in our country.

South Arcot lignite can be used as a chemical raw material from which a great many chemical substances may be obtained.

One of the important uses to which South Arcot lignite can be utilised is for the reduction of large proved iron ore resources of this State to iron and steel. The lack of coke and coal has been the main obstacle for a large scale iron and steel industry in South India. Although lignite does not produce coke, when carbonized it can be used for the reduction of iron ores to metallic iron. These processes which make use of non-coking coals for the reduction of iron ores are called direct reduction processes and they have been successfully operating in Sweden. Similar plants were in commission in the U.S.A., Japan and Germany during the last war. This process is of very significant interest to our State.

Good Source of Hydrogen

One of the chief raw materials for making ammonia and ammonia fertilisers like ammonium sulphate, is the hydrogen which is produced by electrolysis in a large number of South Indian factories, making hydrogenated oils, fertilisers, etc. Lignite is a good source for the production of hydrogen. Gasification of lignite has been successfully done in Germany, U.S.A. and other countries for producing water gas, domestic heating gas, hydrogen and synthetic gases, the last of which contains mixture of carbon monoxide and hydrogen. With the proper processing of synthetic gas products like petrol, various alcohols, etc., can be obtained.

Experiments so far conducted indicate that South Arcot lignite contains good quantities of wax useful in a number of industries. Wax obtained from lignite has been a German monopoly hitherto. These waxes are used in making polishes, insulating materials and the like. South Arcot lignite promises to be a good source of this wax, called "Montan Wax" in the trade.

Role in Southern Economy

It can be seen from the information given above that South Arcot lignite has various applications in the industry and economy of South India. The lignite deposits can supply adequately the growing fuel demand for the existing industries, assure fuel for the future industries, furnish fuel for domestic service and buses, thus preserving forest wealth and acting as chemical raw material for production of iron and steel from iron ores and for the manufacture of fertilisers, petrol and liquid fuels, and various other products.

The deposits of coal in South Arcot amounting to nearly 2,000 million tons are the only significant coal deposits yet discovered in South India. No other deposit seems to be in sight. The present supply position with regard to coal is not satisfactory. The Coal Commissioner of India estimated that the present requirement of coal for South India is around three million tons. Only about three-fourths of these requirements are met at present. The development of the South Arcot lignite mines seems to hold out great promise for the South.

(To be continued)

Benefit Performance

In aid of its Building Fund, the N.G.O. Association, Madras City Centre, arranged as part of the 'Independence Day' celebrations, a benefit performance *Kalvanin Kathali*, a social drama, written by "Kalki" and staged by Messrs. T.K.S. Bros. at the Kalamandapam open air theatre, National Girls' School, Triplicane, at 6-30 p.m. on 17th August 1952 under the immediate presence and patronage of Sri C. Subramaniam, Finance Minister, Government of Madras. Over 5,000 people, mainly Government servants and their families, witnessed the drama.

Just before the close of the performance Sri M. J. Aruliah, President of the City Centre, welcomed the President of the function, and announced the names of donors.

Sri C. Subramaniam then spoke congratulating the organisers and Messrs. T.K.S. Bros. for their splendid performance. He observed that the Government do realise the sufferings of the N.G.O s. and added that it was not the Government servants alone that suffered and that when the country became a land of plenty and prosperity all including them will be happy. He wished that every one should do his or her duty wholeheartedly and Government servants should help to enforce law and order, they themselves being law-abiding.

Sri T. K. Shanmugham compared the N.G.Os. to the roots of a tree and observed that the tree can flourish only if the roots are well nourished and properly protected. In proposing a vote of thanks Sri P. R. Subramaniam pointed out that the drama was significant in that it characterised the unflinching loyalty of a Sub-Inspector of Police who was also an N.G.O.

Bed Strength in Hospitals Increased

The Government have sanctioned the increase of bed strength in the following hospitals in the State :—

Headquarters Hospital, Vellore, from 133 to 158; Mental Hospital, Waltair, from 164 to 210; Government Hospital, Kancheepuram, from 75 to 131; Government Hospital, Srivilliputtur, from 16 to 30; Kasturba Hospital for Women and Children, Madras, from 407 to 515; and Headquarters Hospital, Salem, from 235 to 295.

MY INDIA

By JIM CORBETT

Published by the Oxford University Press

Pages 190. *Price Rs.* 6-12-0.

Jim Corbett's *Man-eaters of Kumaon* was a literary *tour de force*, a best seller that was chosen as Book-of-the-Month by many societies. It is gratifying, therefore, to note that his latest offering not merely sustains the earlier reputation, but also enhances his worth as a writer of note. The title, though it sounds commonplace, is apt, for the book clearly establishes his moral right to the use of the possessive pronoun.

My India is a collection of stories and sketches about men and animals, heart-warming studies of people and beasts among whom the author had lived for over two decades. His is not the dispassionate curiosity of the field anthropologist, or the patronising interest of the social worker; he had adopted their way of life, shared their joys, suffered more their sorrows. Conventional attitudes thus find no place in such complete identification; the author is sincere in his sentiments because he has got under the Indian skin.

Corbett's *forte* is the jungle theme, and many of the sketches of village life in this collection have the fascinating backdrop of the U. P. forests. But if there is any predominant motif in the book, it is the subject of loyalties. *My India* is a passionate testimony to this quality of loyalty that he evidently admires most among his "fellow-Indians", and each vignette describes one facet or attribute of this quality in the simple code of the rural folk.

The simple straightforward style of the artless narration is the art that conceals art; without the spurious aid of strained effects and purple patches Corbett heightens the emotional impact of the sketches. It would be needless to pick out the characters for special consideration; all of them will certainly persist long enough in the memories of the thoughtful reader....in the Naini Tal group we have the resolute Punwa who toiled like a beaver to bring up her children, Sher Singh and his bull Lalu, the sacrifice of the miserly husband Chadi, the mystery of Punwa and Putali (the babes in the wood), the incredible heroism of Haria who saved his brother Narwa from the tiger. The long short story *Sultana, India's Robin Hood* appeared in *Lilliput*. The other stories in the book deal with equally worthy characters at Mokameh Ghat, beyond Patna.

This is a book of particular appeal to those who cherish human values; a book all should be made to read, more so our schoolboys and undergraduates, even to the drastic extent of having it prescribed as a text-book for non-detailed study!

—P.V.S.

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Prizes for Best Books in Regional Languages in 1951-52

The Government have sanctioned the award of prizes for the best books in Tamil, Telugu, Kannada and Malayalam, for the year 1951-52, as detailed below. Each prize will be of the value of Rs. 500.

Tamil: 1. Prose—*Medai Tamil* by Sri T. M. Daivasikhamani Achariar; 2. Short Story—*Nondi Kili* by Sri T. J. Ranganathan; 3. Novel—*Pen Manam* by Dr. Tirupurasundari (Laxmi); 4. Research—*Ovach Chaithi* by Dr. M. Varadarajanar; 5. Science—*Sakthi* by Sri R. K. Viswanathan; 6. History, Politics, etc.—*Panchala Kurichiveera Charitram* by Sri Kaviraja Pandithar Jagaveerapandiyanar.

Telugu: 1. Evolution of Karnatic Music—*Karnataka Sangeetha Parinamam* by Sri M. V. Narasimhacharyulu; 2. Production and Exhibition of Films—*Chitra Jagati* by Sri D. V. A. Acharya; 3. Criticism—*Telugu Poetesses* by Ubhaya Bhasha Praveena Srimati V. Lakshmikantamma; 4. Science—*Viniyukta Rasayana Sastramu* by Sri Hari Adiseshuvu.

Kannada: 1. Novel—*Kudiyara Koosu* by Sri K. Shivaram Karanth, South Kanara; 2. Drama—*Kundamala* by Sri Moleyar Shankaranarayana Bhat, Mangalore; 3. Satire—*Thimmanna Thale* by Sri Bellary Beechi, Bellary.

Malayalam: 1. Short Story—*Yavanikakku Pinnil* by Sri S. K. Pottekkat, Kozhikode; *Thoppiyum Thattavum* by Sri N. P. Muhammed, Kozhikode (both the works stand bracketed); 2. Prose—*Innathe India Bharanakootam* by Vidayaratnam P. N. Menon, Palghat; *Kappirikalude Nattil* by Sri S. K. Pottekkat, Kozhikode (both the work stand bracketed); 3. Poetry—*Kaladippadukal* by Sri V. Unnikrishna Nair, Kozhikode.

A SURVEY OF IMPORTANT BREEDS AND TYPES OF CATTLE IN INDIA

The Indian Council of Agricultural Research has brought out a bulletin entitled *A Survey of Important Breeds and Types of Cattle in India*.

An attempt has been made in the publication to deal rather exhaustively with the different breeds and types of cattle found in the country. The characteristics which underlie the differentiation of the various breeds and types have been specified. The areas in which they are indigenous have been indicated and the distinctive quality of each breed—whether milch, draught or dual-purpose type—emphasised. The bulletin is profusely illustrated with photographs of the different types of cattle, both male and female, described.

The bulletin is actually a reprint of two earlier publitions on cattle breeds in this country which have been long out of print. The material contained in the previous publications has now been consolidated and printed in the form of a single bulletin to facilitate reading and reference.

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